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ALBANY MEDICAL ANNALS

Journal of the Alumni Association of the
Albany Medical College

VOLUME XXXVII

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ALBANY
THE BRANDOW PRINTING COMPANY
1916

COLLEGE OF
PHILADELPHIA

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VOL. XXXVII JANUARY, 1916 No. 1

ALBANY MEDICAL ANNALS

Original Communications

THE INTOXICATIONS.

Read at the Annual Meeting of the Third District Branch of the Medical Society of the State of New York, held at Hudson, N. Y., September 28, 1915.

By CHRISTOPHER J. PATTERSON, M. D.,
Physician in charge, Marshall Sanitarium Troy, N. Y.

The purpose of this paper is to bring to your attention a few points in a condition which is of interest alike to the psychiatrist and the general practitioner, for in it we find mental symptoms dependent upon material causes.

Korsakow has ably demonstrated a psychosis having as its distinctive features delirium, hallucinations of sight, and sometimes hearing followed by hallucination of the tactual or other senses. There is great disturbance of orientation and perception is much clouded. The speech may be unaffected but the disorders of memory are very characteristic. Illusions of memory (paramnesia) are common. The patient will romance about what he has seen or heard fully believing that it has all happened to him. A patient will tell you that he has just come back from a walk by the sea although in point of fact he has never left his room. It is very easy to suggest these illusions of memory to a patient. Fixed delusions are rare. The patients are very emotional and will readily weep or at times laugh in an uncontrolled manner. Sleep is usually impaired. Associated with these mental symptoms there is commonly, but not always, peripheral neuritis. There is impairment of muscular power and the gait is often ataxic. The tendon reflexes are usually absent but occasionally they may be exaggerated. Tachycardia is often present. The body weight at first falls.

Korsakow says that such disturbance is usually due to alcoholic or narcotic poisoning. This is true, but I believe that too much emphasis has been placed on these causes, for we find clinical conditions varying in no essential particular from those described following typhoid, influenza, diabetes, and chronic poisoning by mercury, lead and arsenic and most commonly auto-intoxication. To illustrate let me read abstracts of the case records of a few patients.

Case I.—Male, age 38. Occupation, saloonkeeper. Habits, alcoholic to excess. Admitted to hospital December 28, 1913. This patient had been drinking excessively for about ten weeks. On the night before his admission he had gastric hemorrhage. He complained of severe pains in his legs and he had difficulty in walking. Two days following, December 30, he had an attack of delirium tremens lasting three days. January 8, 1914, it was noted that the patient was not oriented as to place but had a fair idea of the time. He said he was in Watervliet and laughed at the idea of being in a hospital at Troy. His patellar reflexes were absent and he had pain in feet and legs. His pupils were equal and reacted to light and accommodation. He had no delusions. January 22, his mental condition had improved. He knew where he was and was able to tell the day of week and date, but when asked if he had been away lately he would say "yes, I took a walk over to Watervliet yesterday," when as a matter of fact he had not been off the premises. Physically he was in good health except for alcoholic neuritis of the legs. The patient remained in the condition indicated above for nearly four weeks, but he went home recovered February 21, 1914.

Case II.—Male, age 38. Occupation, clerk in factory. Habits intemperate as to alcohol. Admitted to hospital April 16, 1914. Duration before admission about two weeks. On admission patient was quite weak, confused, disoriented as to time, complained of poor sight, expectorated on his clothes and on the floor, and he did not have control of his sphincters. His pupils reacted to light but were dilated and not concentrically placed. Tremor of hands and tongue, patellar reflexes exaggerated, no Babinski, no pain in legs. He did not recognize those about. His memory was poor and he talked irrationally. This condition continued until the 25th of the same month, when it was noted that he was clear although he complained of pain in his legs now which was not apparent at first. He remained in the institution until the 29th of April, 1914, when he went home apparently recovered.

Case III.—Male, age 48. Occupation, machinist. Onset sudden about July 1, 1914, when there was much mental confusion. On the 12th, although able to walk his gait was staggering. On the 14th, he became delirious. His utterances then were very suggestive of those of a paretic, and his gait, tremulous voice and exaggerated reflexes seemed to support that diagnosis. A lumbar puncture was made but the spinal fluid showed no evidence of a syphilitic condition. He remained actively disturbed and disoriented until early in the following month when he became not so restless. He recognized his relatives and those about him and was able to express his wants. Although able to talk rationally, while his attention was held, he was still disoriented as to time and place. Pupils were dilated but reacted to light. From that time he passed through a slow convalescence until the end of the month. So then the duration of this man's sickness was about two months. In this case there was no history of alcoholism, but the patient had smoked and chewed tobacco to a great extent.

Case IV.—Male, age 40. Occupation, machinist. No alcoholic habits. Admitted to hospital Oct. 16, 1914. The following history was given by his attending physician: "On the 10th inst. the patient in trying to connect a gas fixture in his house became asphyxiated by illuminating gas and the most strenuous efforts were necessary to revive him. He was unconscious for fifteen hours. Since then he has been more or less delirious, and much worse during the last twenty-four hours. However, he is able to recognize members of his family and the doctor. To-day he has refused to take nourishment or medicine." He was brought to the institution bound on a stretcher in a semi-conscious condition. This man remained very voluble for two weeks giving expression to delusions of expansive nature causing one to suspect the existence of paresis. On the 2nd of November he was oriented but still very talkative and did not seem to have insight. He was abnormally cheerful for one in his condition. On November 7, he went home recovered. The duration of this sickness was about four weeks.

Case V.—Female, age 43. Occupation, housewife. No alcoholic history but she had taken bromo-seltzer to excess. Admitted to hospital December 18, 1914. Her husband said about five years ago, after the birth of a child, she suffered from Bright's disease. She has pyorrohea alveolaris. About two weeks ago she gave evidence of hallucinations and illusions of hearing and delusions of persecution. She imagined she heard people making remarks derogatory to her and that she was to be taken from the house naked, etc. Last night she saw a man in her room about to photograph her. She showed much mental confusion and was pessimistic. Deep reflexes exaggerated. Hyperaesthesia of lower extremities. December 30, 1914, it was noted the patient was quite weak and was confined to bed. She had delusions of persecution. Heard people talking about her, etc. Her temperature was normal. She was constipated and seemed to be suffering from a toxemia. She urinated freely. About the 20th of the following month she had shown considerable improvement both mentally and physically and on the 29th of January, 1915, she was allowed to go home on parole. She remained well until May 30, 1915 when she was brought back to the institution again suffering from auditory illusions. She imagined when she heard neighbors talking that they were mentioning her name and talked about her which disturbed her but she had insight into her condition. She remained for about three weeks when she again went home apparently well. She was readmitted on September 7, 1915, suffering from delusions of persecution and reference based upon auditory and visual hallucinations. A striking characteristic of this case is the fact that although she is conscious that the voices she hears and the faces she sees are unreal she is mentally disturbed by her imaginations. This case shows in particular the memory falsifications that have been written of. These too are disturbing in their nature for she imagines that her husband has married another woman, although she knows that she is still his wife and she greets him with appropriate affection when he visits. She is at this writing still under treatment and the delusions are gradually disappearing.

There is little doubt that this condition may be due to many causes other than alcoholism or drug addiction. It is my belief that this psychosis is not caused directly by the alcohol, lead, gas, or other poisons from without, but that it results from the irritation of toxines produced within by the disturbance of nutrition and the other physiological functions set up by the action of the initial poisons.

Treatment.—In the treatment of this condition, whatever the etiology, elimination is of paramount importance. All the excretory organs should be made to work to their full capacity. The bowels and kidneys of course will receive attention, but we emphasize the value of stimulating the skin towards this end. The continuous hot water bath is most useful, but of very practical value is the hot wet pack. To increase the urinary output the Murphy drip has been used with good effect. Even the lungs must not be inhibited in their function as organs of elimination by the patient being quieted by stupifying medicine if he is inclined to shout.

Prognosis.—The prognosis in such cases is, under careful treatment, for the most part favorable, and practitioners should not be hasty in having such patients committed as insane persons.

THE COCAINE AND MORPHINE LAWS.

Read at the Annual Meeting of the Third District Branch of the New York State Medical Society, Hudson, N. Y., September 28, 1915.

By LINSLY R. WILLIAMS, M. D.,

Deputy Commissioner of Health, Albany, N. Y.

Opium and its alkaloids were not generally used in the United States before the Civil War, except for medicinal purposes, although there must have been numbers of cases of habitues. Yet, little is written in regard to it.

The importation of opium into the United States was not large until after 1860, but from 1860 to 1909 it steadily increased until 1904. Although this increase in importation does not seem large from the figures, yet it does seem large when compared with the increase in population. During the decade, 1860 to 1869, the population increased twenty-two per cent, whilst the importation of smoking opium increased twenty-eight per cent and crude opium forty-eight per cent. During the decade, 1870 to 1879, the population increased thirty per cent; opium for smoking, 54.8 per cent; crude opium, 74.6 per cent. From 1880 to 1889 the population increased twenty-six per cent; opium for smoking 76.4 per cent; crude opium 61.9 per cent. From 1890 to 1899 the population increased twenty-one per cent; opium for smoking 7.5 per cent; crude opium 57.4 per cent. From 1900 to 1909 the population increased 15.9 per cent; opium for smoking 59.1 per cent; crude opium decreased 6.4 per cent.

Decade	Per cent of increase in population	Per cent of increase in Chinese Pop.	Per cent of increase of smoking opium	Per cent of increase in crude opium
1860-69	22	80	28.1	48.7
1870-79	30	66.7	54.8	74.6
1880-89	26	4	76.4	61.9
1890-99	21	8.1	7.5	57.4
1900-09	15.9	1.2	59.1	–6.4

The discovery of cocaine from coca leaves was not made until about thirty-five years ago and no record is available of the importance of coca leaves in cocaine until they were separately classified by the Treasury Department in 1909.

The increase in the use of opium and the increase in the use of opium for smoking have not been due to the increase in the Chinese population in this country, although the Chinese population increased 80 per cent from 1860 to 1869; 66.7 per cent from 1870 to 1879; 4 per cent from 1880 to 1889; 8.1 per cent from 1890 to 1899; 1.2 per cent from 1900 to 1909, and it should also be remembered in passing that the average opium smoker who smokes twenty-five pills a day takes only the equivalent of about one-quarter of a grain of morphine hypodermatically.

The importations of opium for the decade 1904 to 1914 averaged about 450,000 pounds annually. For many years there was no duty on the importation of opium, nor was there any duty on the importation of coca leaves or cocaine until 1910. There was no Federal Law restricting the importation or sale of opium until 1909. The Federal Laws restricting the importation of opium and regulating its sale will be referred to later.

The extent of the illicit use of opium and cocaine cannot be estimated with any degree of accuracy. That it has widely increased is a matter of common knowledge. The immediate relief it gives for many conditions, real and imaginary, is so marked that when once used it is only natural for the sufferer to continue its use. The increase in the use of these narcotics may be ascribed chiefly to the following causes:

The immediate relief given by the drugs

The ease with which these drugs can be obtained

The widely extended use of patent medicines and proprietary articles containing a considerable percentage of the drugs

The lack of legislation restricting the sale of these patented proprietary articles, and the crude drug itself

The too-free use of the drugs by practitioners of medicine and dentistry.

The only definite figures of the number of users ascertainable are from the State of Tennessee. Rules and regulations adopted by the Tennessee State Department of Health in accordance with their Anti-narcotic Law, require for the renewal of any prescription for a narcotic addict, a certificate from a physician with a sworn statement that the patient is a sufferer of such and such a disability, such renewal of the prescription being ordered by the State Department of Health. By this means there were 2,370 persons reported during the year ending January 1, 1915, and known to be drug addicts in the State of Tennessee. It is estimated by the Tennessee Board of Health that there are in the State of Tennessee at least 5,000 drug addicts, and that the same proportion of population throughout the whole United States would 'give 215,000 addicts. Considering the fact that Tennessee is mainly a rural State the Tennessee authorities believe that at least twenty-five per cent should be added to this number, giving approximately 269,000 addicts in the United States. Based on the cost of drugs actually used in Tennessee at retail prices, it is estimated by the Tennessee officials that the annual expenditure for the drugs in the United States would be at least $14,000,000 by addicts who are not taking drugs in any way for their own benefit.

The physician should remember that a certain number of cocaine and morphine habitues receive their first dose from a physician and frequently for some trifling illness or injury. The ease with which a habit can be acquired should not be underestimated, and this is especially true in rural sections where the physician frequently leaves a larger number of doses of the drug for his patient in order to reduce the number of visits which it might be necessary to make if he had left a smaller number of doses of the drug. It should also be remembered that there has been a large increase in the use of the various alkaloids, codeine, heroin and the various salts of cocaine and eucaine.

Between the years 1911 and October, 1913, twenty-one States and territories, including the District of Columbia, have enacted legislation which in some way protects the public from the general sale and use of narcotics. A complete digest of these laws and regulations was published by the Public Health Service.*

Legislation

The first legislation in New York State was enacted in 1911 and amended in 1913, regulating the sale and possession of cocaine and eucaine. This law amends the Penal Code, section 1746, and prohibits the sale of cocaine and eucaine or the alpha or beta salts of these drugs, placing specific requirements upon wholesalers and dealers, and requires buyer and seller to keep a record of the products purchased and sold. The package must be labeled, showing the name and quantity of the drug and the word "poison" in red ink. The manufacturer or wholesaler must keep a definite record of the quantity sold, a description of the package and other details to identify the package and the amount sold. The dealer, the druggist and the doctor (veterinarian or physician) must keep a record of the purchase, stating the date of purchase, the name and the form of drug, the name and address of the seller, the name of the manufacturer, a description of the package; how the delivery was made. In other words, the law requires that every sale of cocaine or eucaine and their salts shall be made a matter of written record, not only by the seller but by the producer, and both the health and police authorities have access to the records, and that any falsification of the record or failure to keep a record, or if the amount on hand is less than the amount sold, subtracted from the amount originally on hand, is a misdemeanor. It is lawful, however, for a physician to prescribe cocaine and its salts, but if the percentage of such prescription exceeds one per cent the pharmacist is required to verify the same by inquiry from the physician by telephone or otherwise, the prescription to be retained by the person (the druggist) issuing the drug and a certificate issued to the person receiving such drug, specifying the name and address of the person to whom it is sold; the name and address of the physician; the date of sale, and the amount of the drug sold. Such prescription may not be refilled, but if a prescription requires not less than one grain to each fluid ounce, or two grains to the ounce in the case of an ointment, this prescription may be refilled.

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* Government Printing Office—Reprint No. 146 of the Public Health Reports—Supplement to Public Health Bulletin No. 56—1913.

Any physician, dentist, veterinarian or druggist who sells, offers to sell, furnish, dispose of or to give away any alkaloids, cocaine or eucaine or the alpha or beta salts or any mixture, compound, etc., of these salts without such a certificate is guilty of a felony. A physician is not allowed by the law to have for use in his profession an amount exceeding one and one-eighth ounces of all of these substances. The physician's duty is as follows: That he must keep in a book a record of every purchase of cocaine or eucaine, the amount purchased, how delivered, in what form it was delivered, and must keep a record of all such amounts dispensed by him, and in dispensing this drug he must issue to the patient a certificate giving his own name and address, the name and address of the person, the date the drug is issued, and the amount of the drug issued. If he does not give this certificate he is guilty of a felony. In the keeping of his record he must note the amount actually dispensed. He need not keep a record of the actual amount used in his ordinary practice, except that he must at least once in six months record the gross amount of such substances disposed of by him. For example, in ordinary nose and throat work where a considerable amount of cocaine and eucaine solution is used, and in the practice of surgery where the physician actually uses the drug himself on the patient it is not necessary for him to keep a record of the amount so used. He must, however, once in six months keep a record of the amount of cocaine or eucaine used by him in his practice.

HABIT-FORMING DRUG LAW

In 1914 the now well-known Boylan Law was enacted, restricting the sale of opium and its derivatives, and chloral. The law was designed to prevent the sale or possession of habit-forming drugs, except for scientific work or for the treatment of disease or injury. It provides that no person shall sell at retail or give away any chloral or opium or any preparation containing these drugs or derivatives, except on the written prescription of a physician, veterinarian or dentist. It exempts, however, certain domestic and proprietary medicines which do not contain more than two grains of opium; one-quarter of a grain of morphine; one-quarter of a grain of heroin, or one grain of codeine; or ten grains of chloral or their salts in one fluid ounce, or if a solid preparation, in one avoirdupois ounce, nor to plasters, liniments or ointments for external use only. The law also specifies that no prescription may be issued until after physical examination of the person prescribed for. The law does not require the health authorities to provide special prescription blanks, but if after physical examination a duly licensed physician, veterinarian or dentist finds it necessary to prescribe these drugs he is permitted by law to use his own prescription blanks, provided such blank contains his name in full, his office address, his office hours, his telephone number, and the name, age and address of the person to whom, and the date on which, such prescription is issued. When, however, a prescription calls for more than four grains of morphine, thirty grains of opium, two grains of heroin, six grains of codeine, fourteen drams of chloral, it may not be filled until the correctness of the prescription has been verified by the druggist by telephone or otherwise. No prescription may be filled more than once, whether the amount of the prohibited drug called for be small or large. The prescription is to be kept by the person who fills it, and placed on his general prescription file after being inscribed with a regular consecutive number, the name and address of the purchaser and the date on which the sale was made. The person who furnishes the drugs must, when dispensing the same, place upon the package a label or deliver therewith a certificate stating his name and address, the name and address of the one upon whose prescription the sale is made, the date of the sale, and the name of the person to whom it is made. Possession of any of the designated drugs by other than a duly authorized person is a misdemeanor. The certificates or labels called for above are not required to be furnished by the health authorities. The provisions of this section permitting these drugs to be obtained only on the written prescription of a physician, veterinarian or dentist, do not apply, however, to manufacturing pharmacists or chemists, or to wholesale or retail pharmacists or druggists, or to hospitals, colleges, scientific or public institutions.

The persons last named, together with physicians, veterinarians, and dentists may obtain the supply of the drugs required by them in connection with their practice or business by employing the official order blanks required by section 247. This section provides that the local boards of health or health officers shall be supplied with official order blanks, serially numbered in duplicate, to be furnished by them to local duly licensed physicians, veterinarians, or dentists, and to manufacturing pharmacists or chemists, to wholesale or retail pharmacists or druggists, and to hospitals, colleges, scientific or public institutions, for use in writing all orders for the purchase of any of the designated drugs required by them for their practice. It is unlawful for any person to dispose of any of these drugs to a physician, etc., without first receiving from him an official order blank, which is to be kept on file by the person dispensing the drug, together with the date of the sale, the name and address of the purchaser, and the name of the seller.

Section 248 imposes on physicians, veterinarians, and dentists, the duty of keeping a record which must be open for inspection for five years,* of the name and address of each person to whom they have administered or disposed in any way whatsoever of any of the prohibited drugs. These records are not required to be provided by the health or other authorities.

Section 249 regulates the sale of hypodermic syringes, while section 249a provides for the commitment of habitual users of the prohibited drugs to State, county or city institutions. State hospitals for insane are bound to receive persons committed under this act, and the political subdivision is responsible for commitment when he is sent to any other institution. Although this law provides for the commitment of drug habitues to the State hospitals for the insane, the State Insanity Law gives to the superintendent of each institution the authority to refuse to accept any individual patient if he does not believe such patient is a suitable one for the institution. In some of the State institutions for the insane, drug habitues have been admitted and cared for, but the Attorney-General has ruled that such cases shall not be committed to State institutions.

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*Amended in 1915 to two years.

The revocation of the licenses of physicians, dentists, etc., who are addicted to the use of these drugs is made possible by section 249b, while section 249c governs the revocation of licenses after conviction of violation of any of the provisions of this statute, which violations are made a misdemeanor by section 249d.

This law was amended in 1915 in order to conform with the Federal Internal Revenue Law, known as the Harrison Law. This amendment requires " the druggist to keep either a separate file of all prescriptions for these drugs, or if not a separate file he must give a file number to each prescription, the name of the physician or surgeon signing the same, and the name of the person for whom the prescription is filled." It also specifies that the Commissioner of Health may approve of order blank provided for in any act of Congress for this purpose,* and diminishes the number of years for which the records must be kept, from five to two.

Federal Laws

In 1909 Congress prohibited the importation of opium for smoking, but after this law went into effect various manufacturers in this country soon learned how to prepare crude opium into opium for smoking, and its sale was largely increased. The law was then amended and an internal revenue tax was placed of $10 per pound for the preparation of this variety of opium. A duty of five cents a pound was placed on coca leaves in 1909, and $1.50 an ounce on cocaine, and the tariff on opium was also increased, neither of which has in any way restricted the importation of these drugs, although it has brought the Federal Government half a million dollars annually on opium and about $60,000 a year on cocaine.

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*Approved by Commissioner of Health, 1915.

In 1909 in the appropriation bill for the Post-Office Department there was added the following clause: "No part of this appropriation herein made shall be used for the carrying in the mails any malt, vinous or intoxicating liquors or intoxicating liquors of any kind, or any cocaine or derivative thereof." This statement was not repeated in the appropriation for 1910, as the amended Federal Penal Law of 1909 gave to the Postmaster-General the power to prevent the use of the mails for the transportation of cocaine and other poisons.

The enactment of various State laws restricting the possession and sale of opium, chloral, cocaine and eucaine have to a certain extent diminished the use of these drugs. It still remained possible for illicit users of these drugs to purchase them from other States, and Congress felt it necessary to enact a law which would prevent this inter-state traffic. Any question of constitutionality was avoided by placing an internal revenue tax on the sale of opium, coca leaves or any of their compounds, and the law, known as the Harrison Law, became effective March 1, 1915, and is as follows:

Every physician and other persons, corporations, etc., must register with the collector of internal revenue of his district his name and place of business, and if he has no office, his residence. His application must be made on a special form, and a yearly tax of one dollar paid on or before the first day of July annually. Special employees of firms are not required to register if their firm has registered, and officers of institutions, State, government, etc., are not required to pay the special tax unless they are engaged in private practice. In order to purchase any drug an individual, corporation or physician is required to have a special order form provided by the rules and regulations of the collector of internal revenue. These forms are in duplicate, and the duplicate must be retained by the recipient of the drug for a period of two years. These forms are purchased from the collector of internal revenue by physicians who have received a license for one dollar per hundred and after being used must be kept by the local collector of internal revenue and must at all times be open to the inspection of the authorized agents of the treasury department, as well as officials of any State or Territorial or municipal government charged with the enforcement of any law or ordinance regulating the sale or the distribution of these drugs.

In accordance with the ruling of the commissioner of internal revenue those members of the medical profession who are not properly included as licensed physicians or surgeons are not allowed to register. For example, in this State an osteopath is classed as a physician, but as he is not by law permitted to use drugs it would hardly seem that he would be entitled to a license to purchase opium or cocaine and their derivatives. Practitioners must obtain their supplies from registered dealers in form orders, yet it is not required to receive such an order from their patients. They must, however, keep a record of all such drugs dispensed or distributed, the date, and name and address of the patient, except in those cases where the patient is personally treated or attended outside of the practitioner's office.

The commissioner of internal revenue has so construed the term "personal attendance" as to require a practitioner to keep a record in every case where drugs within the scope of this law are administered or distributed within the practitioner's office. Certain authorities believe that the courts will hold that a physician administering any of these drugs without regard to the place of administration, to a patient after that patient has been personally examined, will not be required to keep a record of the administration of the drug. A record must also be kept of all these drugs left with the patient to be taken in the practitioner's absence. Certain physicians classified as specialists who use in their daily practice diluted solutions of cocaine are required by the commissioner of internal revenue to keep a record of the date of the preparation of such solution, the amount of the drug used in preparing the solution, and the date on which this solution was entirely consumed. This rule does not extend to general practitioners. This is a fine point, however, for certain specialists might be able to prove that they were general practitioners, and general practitioners might be doing a large amount of special work; but physicians are urged to follow this ruling as closely as possible.

A practitioner of medicine may write prescriptions for any of these drugs, but must add the name and address of the patient, the kind and amount of drug, the date of issuance, and the signature, address and registry number of the prescribing practitioner. Any ordinary prescription blank, if it bears the practitioner's name, address and registry number will serve, and it is not necessary to make and preserve duplicate copies. Order forms are not to be used as prescription blanks. Telephoned prescriptions are not lawful. The law does not limit the amount of narcotics which may be prescribed, but the treasury department has ruled that it will be unlawful for a physician to prescribe these drugs in larger quantities than necessary for the proper ethical treatment of a patient, and it was understood that objection was made to a physician prescribing as much as one ounce of morphine at any one time.

Registered physicians will be held accountable for the acts of employees, nurses, office assistants, etc., in nursing and distributing any of these drugs. They will also be allowed to write prescriptions prepared in the proper way for drugs used on ocean-bound vessels or where such vessels will be beyond the reach of registered physicians, but on such prescriptions there must be indicated the purpose for which these prescriptions are issued.

Exemptions from the Law

The law does not apply to the sale, distribution or possession of preparations and remedies which do not contain more than one-quarter of a grain of morphine; one-eighth of a grain of heroin, or one grain of codeine or any salt or derivative of any of them, to one fluid ounce or one avoirdupois ounce. Paregoric contains less than two grains of opium per ounce and this may be sold without prescription. External preparations may be used without prescriptions, but preparations containing cocaine, its salts, alkaloids or their derivatives, are not exempted. The only exception to this rule is when a specialist, such as an oculist or aurist, uses a dilute prescription in his daily practice. Ointments or other preparations containing the drugs in quantities not specifically exempt, whether used for aural, nasal or other administration, are not in such cases used externally and are therefore not exempt from the provisions of the law.

In the case of breakage or leakage a duplicate order must be made out with a statement as to the amount of drug lost.

The penalty for violation of the law is a maximum of $2,000 fine or five years' imprisonment, or both, and the sum of $150,000 was appropriated for the purpose of carrying the provisions of the law into effect.

Differences Between the Harrison Law and the Boylan Law

For all practical purposes these two laws are the same. The commissioner of health has ruled that the order blanks required by the Federal law may be used for compliance with the State law. The amount of drug used without prescription is identical. The State law requires the pharmacist to verify the prescription in the case of larger amounts of the drugs. The State law also requires the special order blank for the purchase of chloral, for which purpose the Federal blank is to be used. The State law requires a prescription for any person to purchase a hypodermic syringe or needle.

It is quite natural that physicians, not only those who are practicing medicine and dispensing these drugs in good faith for the best interests of their patients, but also practitioners who are willing illegally to dispense these drugs, find it a hardship to keep records and to supply themselves with the necessary forms and to go through the necessary red tape to follow out the provisions of the law. It should be remembered, however, that no small percentage of drug habitues have received their first dose from a physician, and in many instances this first dose was unwarranted.

The horrors of drug habitues, the utter loss of moral character, attendant to the use of these drugs, should be ever present in the minds of physicians when using these drugs, not only for the simple purpose of examination but also for the relief of pain.

Two features of these laws need special mention. First, the laws exempt a large amount of patent medicine and proprietary products which contain a sufficient amount of the drugs to give an actual therapeutic effect and to pave the way for the formation of the drug habit. It is too easy at the present time to purchase these remedies and to become a paregoric drinker or patent medicine taker and then soon to find that it is necessary to secure larger doses of the drug therein contained, by illegal means. Second, the laws place a large responsibility on the physician, which I believe is just, but they also place a large burden upon the real sufferer from injury or disease, who is required to see his physician whenever he desires to have his prescription renewed. This has been obviated in the State of Tennessee by rules and regulations giving the commissioner of health, as I have pointed out before, the power to renew a prescription after an affidavit has been made by the patient and his physician that a certain amount of drug is necessary. These regulations have worked satisfactorily and it has been possible for the State health officials to reduce the amount of the drug consumed by many patients. There is a possible objection, however, to this, as it might be stated that the health officials were actually practicing medicine without reexamining the patient. Whether the benefits outweigh the possible harm the future will tell.

In closing, I cannot point out too strongly the necessity for living up to the letter of the law, and for keeping your records as accurate as possible, and I also urge you not to give any of these drugs lightly or inadvisedly, but with a deep feeling of appreciation of the danger whenever one of these drugs is used.

In preparing this review the following reports and articles have been freely drawn from:

The Reference Book of the Federal Narcotic Law. Currier and Forbes, Chicago, 1915.
The Enforcement of the Tennessee Anti-Narcotic Law. L. P. Brown, American Journal of Public Health, April, 1915.
The Curse of Narcotism in America. Jeannette Marks, American Journal of Public Health, April, 1915.
Proceedings of the International Conference on Opium at the Hague, 1911-1912.
Public Health Bulletin No. 56—1915.
Habits that Handicap. Charles B. Towns.

The Quantities of the Several Drugs Entered for Consumption in the United States During the Years 1909-1912

	1909	1910	1911	1912
Coca leaves . . . . lbs.	1,100,649.00	708,546.00	1,226,771.50	1,179,540.00
Cocaine and salts of . . . . oz.	32,272.00	54,560.00	4,031.00	2,004.00
Opium, crude . . . . lbs.	465,776.08	411,444.27	502,407.03	384,911.61
powdered . . . . lbs.	. . . .	. . . .	67,962.99	77,551.10
prepared for smoking . lbs.	148,508.80	27,934.86	. . . .	. . . .
Morphine or morphine sulphate . . . . oz.	152.40	13,032.00	20,345.00	13,825.00
All other alkaloids of opium . oz.	3,779.00	23,970.50	480.25	634.00

Approximate Number of Average Doses of Habit-forming Drugs Imported into the United States During the Fiscal Years 1911-1912

	1911	1912
Coca leaves	305,000,000	294,000,000
Cocaine	35,000,000	17,000,000
Total	340,000,000	311,000,000
Opium	2,500,000,000	1,740,000,000
Opium, powdered	500,000,000	540,000,000
Morphine	40,000,000	27,500,000
Other alkaloids	900,000	1,200,000
Total	3,040,900,000	2,308,700,000

Year ending June 30, 1910—117,134 lbs., free of duty
591,412 lbs., 5 cents a pound
Year ending June 30, 1911—1,226,771.50 lbs., 5 cents a pound

THE RELATION OF THE PRACTICING PHYSICIAN TO THE HEALTH OFFICER.

Read before the Columbia County Medical Society on May 4, 1915.

By PAUL V. WINSLOW, M. D.,
Sanitary Supervisor, State Health Department.

Pasteur has said " It is within the power of man to make all the infectious diseases to disappear from the world." In the past the family physician labored faithfully to the end of his limitations repairing the ravages of disease, curing some, relieving others, always rendering great social service, receiving in return a meager recompense. But with the development of science, bacteriology, surgery and preventive medicine, society's demands upon him have increased, and it seems paradoxical that he should be instrumental in wiping out disease, at the same time lessening his income.

The physician of to-day is a teacher. It is not only his duty to cure a case and collect his fee, but he must go further and inform his patients on the nature of the disease, its cause and its prevention. The old veil of mystery that has covered medicine is gradually being lifted, and under it is discovered the social service that physicians owe to the public. No one has a better opportunity for such work than the physician, for it is he who sees how the other half lives, and it is he who is in a position to suggest remedies for the evils that exist. The lack of fresh air, the crowded tenement, the body that needs bathing, venereal disease, the teeth that need brushing, the danger of people with communicable disease, these he may discuss with his patients, irrespective of their social standing. The physician is the connecting link between the Health Department and the public, and as a chain is no stronger than its weakest link, he must be strong.

It is a fact that physicians, as a class, endorse the principles of preventive medicine. They are willing to assist in campaigns of education, and through their associations do wonderful work in the field of prevention.

It is as individuals that they fail, and it may be because they are so interested in their patients that they are unmindful of their obligations to the public. How many practicing physicians fail to report contagious disease to the health officer? How many connive at violation of quarantine? How many give weak support to the public officials in health matters? The physicians, who are moulding public opinion, are far too few, consequently many of the public health laws and regulations are not taken seriously. It is comparatively easy for physicians to report to the health officer scarlet fever, smallpox and diphtheria, because they have been obliged to do this for a long time, and it has become a habit. The more recent reportable diseases, such as tuberculosis, chickenpox, whooping cough, etc., are more difficult to report because the reporting of them has not yet become a habit. But with the health officer at their heels and the sanitary supervisors constantly on the alert, investigating suspicious cases of communicable diseases, it is only a matter of a short time before the physician will realize the importance of reporting these diseases also.

Recently an instance came to my attention, where unfriendly relations existed between the health officer and a physician. The failure of the latter to report to the health officer several cases of "septic sore throat" resulted in an epidemic of forty-five cases and one death. The suffering, inconvenience and loss of life were of no small account, and it is inconceivable how intelligent men can allow their personal prejudice to interfere to such an extent with their duty to the public. It is the prompt reporting of a case of contagious disease to the health officer that is so important in preventing an epidemic. When a communicable disease is discovered by a physician, he should see that the patient, and other members of the family, observe the quarantine regulations from the minute that he makes up his mind that it is such. If the patient is a school child, all other children from the same family should be notified not to attend school. Yet, in many cases, the health officer finds that the attending physicians have failed to inform the family even in this one particular, which is so essential. The mild case of communicable disease is one that tempts the physician, and it is known that many of the mild cases are not reported, but it is not possible to estimate the amount of suffering and deaths caused by this neglect. We all appreciate that from a mild case may develop one of unusual severity, and the attending physician must realize that he and his patient are in one little world, while on the outside is a big world with many valuable and useful lives, that cannot afford to be stricken with disease. It is, therefore, necessary that a better understanding and co-operation exist between the health officer and physician in reporting all communicable disease.

If the health officer gets an early report, he has the opportunity of visiting the home where communicable disease is, and he may also visit the school, where he can segregate those who have been exposed, and instruct the pupils and teachers in the methods used to prevent any further outbreak. The physician can either stand in the way or assist the health officer, and if he does the latter, who can estimate the good that may be accomplished.

The duty of the physician does not end with the instructing of his patients and the reporting of the communicable disease to the health officer. He should take an active interest in all public health movements, such as " Public Health Exhibit," " Fly Swating Contest," " The Organization of an Infant Welfare Station," or " The Establishment of a County Hospital for Tuberculosis." It is erroneous for the physician to feel that this work belongs to the health officer alone. The sooner he realizes his duty in this respect, the better it will be for himself, and for the community in which he lives.

The great trouble with the medical profession is that they have been waiting until the music has ceased before they begin to march. They have allowed others to take up the work that belongs to them, and they have no one to blame but themselves. However, physicians are realizing more and more their duties, and it is to be hoped in a short time they will all have a deep sympathy for public health work.

In closing, I would urge the physicians to teach their patients how to guard against disease, report their communicable diseases at once, co-operate with the health officer in all things, endorse public health movements, displaying that altruistic spirit which has characterized our profession through the ages.

SURGICAL DONT'S.

President's address of the Third District Branch, New York State Medical Society, at the meeting held at Hudson, N. Y., September 28, 1915.

By A. H. TRAVER, M. D.

I wish to thank the members of the third district branch for honoring me in making me your president. I also wish to thank the other officers of this society and especially the members of Columbia County Medical Society for their hearty co-operation; I also want to thank the various speakers here this afternoon for their kindness in spending their time in coming here and by so doing making this meeting a success.

In the surgeries there are pages written about things to do in the various surgical diseases, but little written about things not to do. So I thought it might be interesting and perhaps instructive to mention a few things not to do, so I have written on " Surgical Dont's."

In case of persistent vomiting don't give morphine or cathartics but carefully examine your patient and see if by so doing you cannot determine the cause of the trouble. If morphine is given it relieves the patient's distress but does not cure the cause of the trouble. In so doing the patient is deceived in the belief that he is getting better and will doubtless refuse the necessary operation. The safe time to give morphine is after you have made the diagnosis. In case you are unable to make a diagnosis call consultation. Two heads are better than one even if one is that of a surgeon. The prognosis of most surgical diseases of the abdomen depends on the time operation is performed. Early operation early recovery, late operation late recovery or possibly death.

Don't watch a case of appendicitis till the appendix ruptures. The physician who sees the case early is the one best able to make a correct diagnosis. For it is at this time that you get those most valuable symptoms—local tenderness and muscular rigidity. If you are uncertain of your diagnosis now is the time to call consultation, for if you delay till the appendix is ruptured then the symptoms become general and a correct diagnosis is very difficult. If the case is seen late you may be able to make a diagnosis of peritonitis but that is not enough. For if the peritonitis is appendicular in origin you must operate at once, but if the peritonitis is pelvic in origin operation must be delayed till the infection has become localized. To put it in other words, the sooner the operation in appendicitis the lower the mortality rate, while operation performed early in acute pelvic inflammatory disease is much more dangerous than one performed later after the infection has become localized. In many cases it is most difficult, even if the case is seen early, to make a differential diagnosis between acute appendicitis and acute pelvic inflammatory disease, yet it is still much more difficult to arrive at a correct diagnosis if the case is not seen till the infection has spread from its local origin.

Dr. Maurice Richardson said, " Have we not demonstrated beyond dispute, that the prognosis in a given case of appendicitis cannot be accurately told in any case and has not the medical and surgical world become convinced therefore, that the only safe course is earliest possible operation."

Dr. John Murphy says, "A case of ruptured appendix is one improperly treated for it should have been removed before it ruptured." Now let me ask the question, if Dr. Richardson with all his experience was unable to determine the extent of the disease, how can we of much less experience tell when the appendix will rupture? And if Dr. Murphy is correct in his statement, " That a ruptured appendix is one improperly treated," and if we cannot tell which appendix will rupture how can we treat a case of appendicitis safely without having operation performed early before the appendix has had time to rupture?

Perhaps some of you think you are able to determine the condition of the appendix and to tell which case will subside and which will rupture. If you can, please put your description in print as soon as possible so that others may learn. For I have heard more than one surgeon say that he was unable either from the severity of the symptoms or the physical signs to tell which case of appendicitis would go on to rupture or which would subside. Surely you cannot tell the condition of the appendix by the severity of the symptoms. For instance the pain is more severe in a case in which the appendix contains a concretion than in one where the appendix is gangrenous. And if the appendix is ruptured for a time the patient may be entirely free from pain.

The second symptom is temperature. We have all seen cases with very high temperature in which the appendix was not greatly diseased, while in other cases in which the temperature was normal the appendix was found gangrenous.

Pulse is without doubt the most important guide in determining the condition of the appendix. If the pulse is weak, rapid and of low tension the appendix is probably ruptured. But when we get this condition present it is too late for a favorable operation. Muscular rigidity and local tenderness become general as soon as the appendix ruptures. So if you do not see the case till late you may not think the appendix is the seat of the trouble.

If you are connected with a hospital where many cases of appendicitis are operated upon you will notice that whether or not the patients survive the operation depends not so much on who the operator may be as it does on the time operation is performed. And that depends on whether or not the general practitioner gets the patient to the hospital for an early operation. It is the family physician who sees the case first and on him rests the responsibility of an early operation. I can demonstrate this best by the following statistics. There are two physicians for whom I have operated on ninety-eight cases of appendicitis with no deaths. There is one physician for whom I have operated on thirteen cases of appendicitis with four deaths. The third doctor thinks he can tell which case will get well and does not consider an operation indicated until he decides the patient will not get well without an operation. Which of these physicians do you want to take care of you should you have appendicitis?

How can I close a discussion on appendicitis better than to quote Dr. Murphy, who says, " We can never tell in a given case what the next day will bring. Therefore operate to-day."

Don't move cases of peritonitis long distances to the hospital. If for any unfortunate reason the patient has a general peritonitis before operation is decided upon don't move the patient for by so doing you will cause the peritonitis to become general and you will also use up the patient's strength. Rather keep the patient home and have the operation performed there as soon as possible. Kindly do not misunderstand me and think that I advise home operations, for they cannot be done there as well as in the hospital. But rather in place of having peritonitis cases operated on in the home, get the patient to the hospital early so as to have operation performed before a peritonitis has had time to develop.

Don't delay in cases of strangulated hernia.

Do not use too severe force in endeavoring to reduce the hernia, and in case you fail to reduce it don't delay operation. Once in a great while a hernia that has been strangulated for a time may suddenly disappear. But this is the exception to the rule. While you are waiting for the one case to become reducible you will lose many cases by the intestines becoming gangrenous. And should the one exceptional case get reduced you still have the hernia there to cause more trouble. The best reason why operation in strangulated hernia should not be delayed is that it is not a serious operation if done before the intestine is gangrenous. And it not only relieves the patient of his present serious condition but in most cases cures him of his hernia, thus relieving him of future danger. And should the patient for any reason be afraid of taking ether you can easily operate under local anasthesia with but little pain to the patient. It is just about as safe in a case of strangulated hernia to wait to see if the hernia will become reduced as it is safe in the case of a patient having swallowed a bichloride tablet to wait and see if the patient will vomit the tablet. The condition causing the highest mortality is procrastination.

Don't give cathartics in cases of acute appendicitis and in acute intestinal obstruction.

In case the appendix is inflamed and full of pus or faecal matter can you think of anything that would cause it to rupture any quicker than a dose of physic? The cathartic increases the peristaltic action of the intestine and so increases the tension in the diseased appendix and causes it to rupture. And should the appendix rupture the cathartic increases the intestinal peristaltic action and forces the pus out through the hole in the appendix into the peritoneal cavity, and so hastens peritonitis.

Physic has like bad effect in acute intestinal obstruction. The action of the cathartic is to increase the pressure above the obstruction and consequently hastens gangrene of the intestine, and makes the intestinal wall more permeable to the bacteria within the intestine. Writing on this subject Dr. Ocsner says, " In the experience the mortality rate has been ten times greater in patients who have been given cathartics before coming to the hospital suffering with intestinal obstruction than in those who have received none." If you wish to empty the intestine give an enema which can do no harm to the diseased appendix or intestine.

Don't put off operation in cases of gall-stones.

Until of late gall-stones have not been considered a serious condition, and some have gone so far as to advise that no operation be performed unless colics occur. But when we study statistics of gall-bladder disease and find in the Mayo clinic in three per cent of the cases of gall-stones there was cancer of the gall-bladder; and that in no case in which cancer of the gall-bladder was diagnosed previous to operation was there a permanent cure following operation. In view of such statistics we must surely advise the removal of gall-stones for there is a mortality of only one-half one per cent in uncomplicated cases, and few complications exist if operation is done early.

Don't massée tumors or delay operation.

As the subject of tumors is so large let us consider only tumors of the breast and those very briefly. While it is not essential that a diagnosis be made as soon as in acute abdominal conditions yet it is essential that we delay as little as possible in making a diagnosis. In case we are uncertain of our diagnosis it is safer to have the tumor removed. In view of the fact that eighty-five per cent of all tumors of the breast are malignant, and in view of the fact that if the operation is delayed till the axillary glands are felt only twenty-five per cent can be cured with the most radical operation, then surely early operation is the only safe procedure. If there is any one thing that will cause the tumor to spread it is irritation caused by constantly rubbing it. What is the use of watching a tumor to determine if it is malignant, for if it is not malignant when first seen it will be in nine out of ten cases if the patient lives five years. And when it has become malignant you have let pass the most favorable time for operation. While speaking of tumors of the breast one should speak of that precancerous condition, abnormal involution or chronic mastitis. For if we are to greatly reduce the death rate from cancer of the breast it will be by more early diagnosis rather than by a more extensive operation. Twenty to twenty-five per cent of cases of chronic mastitis operated on will be found malignant. If there is a discharge of blood from the nipple it signifies an advanced stage of abnormal involution which is practically always malignant. Dr. Wm. Rodman speaks clearly on this subject. He says: " So I insist that in cases of doubt it is much better to do a complete operation in abnormal involution because at least twenty per cent of the cases are malignant at time of operation, and that in itself is sufficient justification for doing a radical operation in the majority of cases."

Dr. Francis Campbell says: " Given a patient with cancer of the breast in the first stage, consulting a physician on its first detection, the fate of the woman is in the hands of the doctor whom she first consults, provided she follows his counsel."

The subject of surgical don'ts is so large that I have taken time to consider only a few of the more important ones. Yet I do not wish to close this paper without mentioning a few more don'ts. Don't let patients think that rectal hemorrhage is always caused by hemorrhoids and is of little significance.

Don't let patients with chronic stomach trouble think all stomach trouble is indigestion.

Don't let middle aged women think irregular menstruation is due to " change of life " and is to be expected.

There are many other surgical don'ts that I might mention if I had the time but if this paper will cause you to consider the few don'ts I have mentioned I will have been paid for the time spent in writing this paper.

In closing may I suggest two very important don'ts.

Don't criticize the surgeon without just cause for some patients will die following operation no matter how carefully the operation may have been performed.

May I suggest to the surgeon, don't criticize the family physician in the presence of patient's relatives or friends. If any advice is to be given, give it to the doctor privately. For there is still much prejudice against operations, especially among country people. And many times the patient or his friends will not consent to an early operation, but will yield only after much argument on the part of the doctor. In the meantime the favorable time for operation has passed. The surgeon must be most careful in the use of his words in speaking to the patient's friends for they are most ready to take some statement of the surgeon as a cause to criticize their family physician should the patient, their friend, unfortunately die.

Editorial

> In the revolutions of medical science, there has been, for some years, a progressive and remarkable change of opinion, in regard to the mode of conducting medical investigations. There appears to have been a tacit but very general admission of the fallacy of medical hypothesis, and the precarious nature of general principles in medicine; and there seems to be an increasing conviction of the indispensable necessity of founding all our conclusions in medical science upon an extensive and accurate acquaintance with the pathology of disease. The facts which are required for this purpose can be derived only from the contributions of practical men; and it is of the utmost consequence that such persons should extensively record their observations, as these must form the only basis on which can be founded any legitimate principles in medical science.
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> JOHN ABERCROMBIE.

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John Shaw Billings.

In his sketch of Dr. Billings* Dr. Garrison has offered another valuable contribution to the history of American medicine. This memoir may be grouped with that of Dr. William Beaumont† as revealing the conditions of thought and practice of two distinct periods of our national life. Both Beaumont and Billings entered early upon military service, the one upon the frontier of the Great Lakes in the contest with Great Britain, the other in the Army of the Potomac in the Civil War. Both were trained in the best school of surgery, that of the battle field, and both entered upon civil life with the serious and unselfish purpose of directing this valuable training toward the advancement of medical science. The accidental case of Alexis St. Martin sent Beaumont in eager inquiry to the centers of experiment and investigation, and thus he came to Washington with accredited fame; as did Billings, after his particular capacity in the administration of army hospitals had been revealed. The parallel in the two lives ceases only with the different eras, for the period of Billings was that of an accomplished civilization, which called for the adaptation of medicine to large and compact communities whose problems of sanitation had not been solved. In the Surgeon-General's office at Washington after the war he was engaged in the analysis of field reports, which led to the "*Medical and Surgical History of the War,*" and later to the reorganization of the Marine Hospital Service, and it is noteworthy that these avocations directed attention to sanitation in so forcible a manner as to lead him to the microscope as a possible agent in the correction of abuses. He found deficiencies in bathing facilities, sleeping accommodation, food, latrines, guardhouses and prisons, ventilation and heating, and his condemnation was sweeping. He mentioned "hospitalism," whose dangers arose from the solid, probably living, organic particles, and early he became interested in minute fungi, which bore fruit in his report on cryptogamic growths in cattle. He was an expert technician with the microscope, but left this special field for others; yet the correlation of unsanitary barracks and hospitals with investigation of this kind is suggestive of the practical character of his processes of reasoning, and the habit of direct thinking so noticeable in all his work.

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* *John Shaw Billings. A Memoir.* By FIELDING H. GARRISON, M. D. Illustrated. G. P. Putnam's Sons, New York and London, the Knickerbocker Press, 1915.

† *Life and Letters of Dr. William Beaumont.* By JESSE G. MYER, A. B., M. D. St. Louis, C. V. Mosby Company, 1912. ALBANY MEDICAL ANNALS, February, 1913.

To these earlier experiences and their effect upon Dr. Billings may be attributed the two great achievements of his life, those placing him among the foremost of American physicians—the Johns Hopkins Hospital and the "*Index Catalogue of the Surgeon-General's Library.*" The casual observer of today who visits the Johns Hopkins Hospital as an institution worth seeing, or the writer who finds at a glance in the "Catalogue" the list of all the articles and all the authors upon the topic of his inquiry, little realizes the scope and value of these innovations. For the Johns Hopkins Hospital is not merely one of innumerable institutions for the care of the sick, but is the fount and origin of modern medicine in America. When Dr. Billings was chosen from many to prepare plans of construction and administration, he outlined to the trustees not only the physical structure, but the ethical, and we may say moral, foundation upon which a hospital should be built, for a hospital is not a building, but an idea: "The Hospital should contribute to Charity, Education and Science. * * * Its patients are to have the benefit of the best medical and surgical skill which can be procured . . . and they are not to be subjected to any annoyances or depressing influences. . . . The Hospital should advance our knowledge of the causes, symptoms and pathology of disease, and methods of treatment . . . for the benefit of the sick and afflicted of all countries and of all future time. . . . This Hospital is to assist in educating physicians, in training nurses, in promoting discoveries in medicine." And in further anticipation of the Medical School to be grafted upon the hospital, Dr. Billings insisted upon small classes, practical instruction; he urged every facility in the way of rooms, instruments, and apparatus, teaching in laboratories, ward and dead-house, and he punctured the didactic bubble in these pregnant words: "Lecturing will be the smallest part of the duty of these professors!" All this a generation ago! Yet one would not say, in hackneyed phrase, looking about upon the numerous institutions conforming with these ideals, that "Dr. Billings was ahead of his time." So definite are his opinions, so accurately has the Johns Hopkins Hospital and School adhered to the text upon which it was founded, that Dr. Billings must now be recognized as the great preceptor of correct medical teaching and training.

And of the *Index Catalogue* the same high opinion must be held. Dr. Welch has placed upon record "his deliberate opinion that the *Index Catalogue* is the most important of American contributions to Medical Science in the Nineteenth Century." It is plain, first, many contributions to literature could not have been made without the bibliographical assistance afforded by this work; and, second, many important advances in science, depending, as they do, upon knowledge of what has been accomplished, would not have been achieved.

Thus having established in the hospital the plan for the training of investigators in medical science and having provided in the *Index Catalogue* the instruments for its elaboration and advance, Dr. Billings has placed upon a firm foundation the principles to guide medicine for generations to come. His work is not only of his time, but for posterity.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, NOVEMBER, 1915.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	19
Typhoid fever	0
Scarlet fever	0
Measles	0
Whooping cough	1
Diphtheria and croup	1
Grippe	1
Diarrheal diseases	7
Pneumonia	11
Broncho-pneumonia	2
Bright's disease	10
Apoplexy	8
Cancer	14
Accidents and violence	14
Deaths under one year	21
Deaths over seventy years	22
Total deaths	154
Death rate	17.03
Death rate less non-residents	14.04

Deaths in Institutions.	Non-Resident.	Resident.
Albany Hospital	4	13
Child's Hospital	1	0
County House	2	1
Homeopathic Hospital	7	7
House of Good Shepherd	1	0

Public places	2	3
St. Margaret's House	1	0
St. Peter's Hospital	5	7
Maternity Hospital	2	9
Federation of Labor Camp	0	1
Albany Hospital Camp	3	1
Totals	28	42
Births		162
Still births		6

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Living cases on record November 1, 1915		452
Cases reported:		
By card	24	
Dead cases by certificate	7	
		31
Total		483
Dead cases previously reported	12	
Dead cases not previously reported	7	
Died out of town	1	
Removed	1	
		21
Living cases on record December 1, 1915		462

Total tuberculosis death certificates filed during November		19
Non-resident deaths:		
St. Peter's Hospital	1	
Albany Hospital Camp	2	
Maternity Hospital	1	
		4
Resident deaths		15

Report of Visiting Tuberculosis Nurse.

Old cases	5
New cases	15
Returned from hospitals	1
Total	21

Disposition of cases:

Died	1
Sent to hospitals	6
To general tuberculosis nurse	9
Remaining under treatment	5
Total	21
Visits made	38
Visits made, old cases	300
Calls at Board of Health office	24

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	5
Scarlet fever	12
Diphtheria and croup	17
Chickenpox	14
Measles	16
Whooping-cough	13
Tuberculosis	31
Mumps	8
Meningitis	2
Total	118

Number of days quarantine for diphtheria:

Longest...... 26 Shortest...... 8 Average...... 14 4/7

Number of days quarantine for scarlet fever:

Longest...... 33 Shortest...... 31 Average...... 31 2/4

Fumigations:

Houses.................. 42 Rooms.................. 248

Milk bottles disinfected	145
Cases of diphtheria reported	17
Cases of diphtheria, antitoxin used	10
Deaths after use of antitoxin	1

Communicable Disease in Relation to Schools.

	Reported		
	D.	S. F.	M.
Public School No. 2	....	1	....
Public School No. 14	....	....	5
Public School No. 15	....	2	....
Public School No. 16	1	....	....
Public School No. 17	....	1	....
Public School No. 18	....	....	1
Public School No. 21	4	1	1
Public School No. 22	....	2	....
St. John's School	....	....	2
St. Joseph's School	....	1	....
Lady of Angels School	....	1	....

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	19
Initial negative	291
Release positive	8
Release negative	105
Suspicious	2
Total	425

Test of Sputum for Tuberculosis.

Positive	9
Negative	27
Total	36

Widal Tests.

Positive	3
Negative	16
Suspicious	4
Total	23
Milk analyses	29
Pathological examinations	1

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	258
Old houses	73
New houses	185
Iron drains	95
Connection street sewers	63
Tile drains	63
Cesspools	93
Wash basins	93
Sinks	95
Bath tubs	84
Washtrays	82
Tank closets	126
Permits issued	134
Plumbing	108
Building	26
Plans submitted	58
Old buildings	23
New buildings	35
Houses tested	58

Peppermint	3
Water tests	55
Houses examined	30
Re-examined	76
Valid	16
Without cause	14

Bureau of Markets and Milk.

Public market inspections	18
Market inspections	124
Fish market inspections	9
Fish peddler inspections	2
Packing house inspections	1
Rendering plant inspections	1
Slaughter house inspections	1
Hide house inspections	3
Milk house inspections	29
Milk depots inspected	10
Dairies inspected	29
Lactometer readings	35
Temperature tests	35
Fat tests	48
Sediment tests	42
Bacterial counts	34
Cows examined	316
Cows removed	1
Cows quarantined	2
Complaints investigated	2
Special investigations, scarlet fever	15
Dairies quarantined, scarlet fever	3
Poultry condemned, lbs	12

Miscellaneous.

Work certificates issued to children	24
Vaccinations	15
Cases assigned to health physicians	65
Calls made	141
Number of complaints of nuisances	40
Privy vaults	6
Closets	5
Plumbing	8
Other miscellaneous complaints	21
Number of dead animals removed	444

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR NOVEMBER, 1915.—Number of new cases, 164; classified as follows: Dispensary patients receiving home care, 31; district cases reported by health physicians, 4; charity cases reported by other physicians, 41; moderate income patients, 63; metropolitan patients, 25; old cases still under treatment, 561; total number of cases under nursing care during month, 725. Classification of diseases for the new cases: Medical, 28; surgical, 8; gynecological, 4; obstetrical under professional care, mothers 39, infants 34; eye and ear, 4; skin, 1; throat and nose, 1; dental, 0; infectious diseases in the medical list, 45; surgical list, 0. Disposition: Removed to hospitals, 26; deaths, 23; discharged ccured, 95; improved, 40; unimproved, 3; number of patients still remaining under care, 538.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 1; nurses in attendance, 5; patients carried over from last month, 2; new patients during month, 7; patients discharged, 6; visits by head obstetrician, 1; by attending obstetrician, 38; by students, 41; by nurses, 56; total number of visits for this department, 136.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,596; for professional supervision of convalescents, 794; total number of visits, 2,390; pay visits, 915; charity visits, 681; unrecorded visits, 794; cases reported to the Guild by 1 health physician, and 41 other physicians, graduate nurses 8, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 89; new patients, 236; old patients, 465; total number of patients treated during month, 701. Classification of clinics held: Surgical, 13; nose and throat, 6; eye and ear, 16; skin and genito-urinary, 8; medical, 13; lung, 9; dental, 0; nervous, 3; stomach, 3; children, 10; gynecological, 8.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The regular monthly meeting of the Medical Society of the County of Albany was held at the Elks Club, Albany, Tuesday evening, November 23rd, 1915, at 8.30 P. M.

The following program was presented: A case of Conjunctival Tuberculosis. Demonstration of patient and inoculated rabbit. Arthur J. Bedell, M. D., Ellis Kellert, M. D. Demonstration of Apparatus. (a) Microsaccharimeter for the estimation of the sugar content of the blood; (b) For the determination of the Carbon Dioxid content of the alveolar air as an index of acidosis. James F. Rooney, M. D. Lantern Slide Demonstration of Infection of the Vera Montanum. James N. Vander Veer, M. D.

The regular monthly meeting of the Medical Society of the County of Albany was held at the City Hall, Albany, Friday evening, December 17th, 1915, at 8.30 P. M.

The following program was presented: Health Work in Albany, Arthur Sautter, M. D.; The Functions of the State Department of Health: Its Activities and Results, Linsly R. Williams, M. D.; Clinical and Anatomical Classifications of Pulmonary Tuberculosis; The Newer Explanations of the genesis of Types, with X-ray plate demonstration, A. H. Garvin, M. D., Raybrook.

MEDICAL SOCIETY OF THE COUNTY OF RENSSELAER.—The annual meeting of the Medical Society of the County of Rensselaer was held at the County Court House, Troy, on Wednesday evening, December 15th at 8.30 P. M. The meeting was addressed by Dr. Arthur W. Elting of Albany, upon "The Treatment of Gaseous Gangrene," and Dr. Victor C. Myers of New York City, upon "The Value of the Chemical Examination of the Blood in the Diagnosis of Renal Insufficiency."

SARATOGA SPRINGS MEDICAL SOCIETY.—The regular monthly meeting of the Saratoga Springs Medical Society was held at the Business Men's Association on Friday evening, December 17th, 1915, at 9.00 P. M. The meeting was given up entirely to the discussion of some important business matters.

CLINICAL CONGRESS OF SURGEONS.—At the annual meeting of the Clinical Congress of Surgeons in Boston, the following officers were elected: President, Dr. Fred B. Lund, Boston; vice-presidents, Drs. Jasper Halpenny, Winnepeg, Man.; Samuel M. D. Clark, New Orleans; general secretary, Dr. Franklin H. Martin, Chicago (re-elected); treasurer, Dr. Allen B. Kanavel, Chicago (re-elected). Philadelphia was selected as the next place of meeting.

PREVENTION OF BLINDNESS.—The National Committee for the Prevention of Blindness has recently sent out a newsletter detailing special activities in each State. Special reference is made to the State Department of Health in relation to the sight of infants in a recent addition to birth certificates.

"Physicians are required to report ophthalmia neonatorum (babies sore eyes) to local health officer within twenty-four hours from the time when first seen. Sanitary Code, Chap. 11, Reg. 1. A midwife, nurse or other person having charge, must report immediately to health officer or physician, inflamed, reddened eyes of infant under two weeks. Penal Law, Sec. 428."

It also refers to the Weekly Bulletin, Department of Health, New York City, October 9, special mention is made of refractive errors in childhood. As a result of nearly 5,000 complete and careful refractions performed at one of the department's clinics the request is made that every child before beginning school life should have its refraction estimated. If correcting glasses are required, they should be worn. The following conclusions are presented:

"In accordance with the observations of previous investigators, myopia or short sight is a condition rarely present at the beginning of school life, gradually increases with the age of the child, so that at the age of sixteen years, almost one-half of our cases had more or less myopia."

"If a child has a high degree of hypermetropic astigmatism, mixed astigmatism, or myopia of medium degree, with vision after correction, of only 20/50 or less, it should be placed in special classes with a curriculum that minimizes the amount of near work. There should be close co-operation between school authorities, school nurses, school doctor on the one hand and ophthalmologists on the other."

THE EVANS MEMORIAL FOR CLINICAL RESEARCH.—The Evans Memorial for Clinical Research is desirous of communicating with as many physicians as possible who have used bacterial vaccines in the treatment of typhoid fever for the purpose of collecting statistics concerning the efficiency or non-efficiency of the method as a therapeutic measure. If any who have done this even with only one or a few cases will send their names and addresses, blank forms will be sent to them upon which uniform reports may be made. Due credit will be given to each in any reports that may be published. Address all communications to 80 East Concord St., Boston, Mass.

UNIVERSITY OF PENNSYLVANIA.—On November 8th, the trustees of the University of Pennsylvania empowered their finance committee to make arrangements with the committee representing the trustees of the Medico-Chirurgical College for the merging of the two institutions. The Medico-Chirurgical board has given the same power to its committee. The joint meeting was held November 15th.

HARVEY SOCIETY LECTURES.—The third lecture of the Harvey Society lecture series delivered before the New York Academy of Medicine, October 27th, was by Dr. Eugene DuBois, on "The Respiration Calorimeter in Clinical Medicine."

AMERICAN SOCIETY FOR THE STUDY OF ALCOHOL AND OTHER NARCOTICS.—The 45th annual meeting of the American Society for the Study of Alcohol and Other Narcotics was held at the Hotel Raleigh, Washington, D. C., on December 15th and 16th, 1915. Programmes may be obtained by addressing the secretary, Dr. T. D. Crothers, Hartford, Conn.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.—The twenty-first annual meeting of the American Academy of Ophthalmology and Oto-Laryngology will be held in Memphis, Tenn., December 5th to 7th, 1916, under the presidency of Dr. John E. Brown, Columbus, Ohio.

New York State Medical Library.—Four years ago the New York State Library at Albany was wiped out by fire, including the medical portion. So quickly was the work of restoration undertaken, however, that to-day the Medical Section contains 19,600 bound volumes, several more than it contained in 1911, several thousand pamphlets and reprints, and much unbound material. About 500 current periodicals are now received and more than 200 of these are complete from the beginning. The library is prepared to loan these books to licensed physicians, full-time instructors or the faculty of any medical college, members of the house staff of any hospital, registered and certified nurses and those engaged in pathological research who offer suitable references. The books are sent by mail and the only expense to the borrower is the payment of return postage. Physicians coming from a distance to consult the library may have books, etc., reserved for them by notifying the librarian in advance. All requests should be addressed to the library. The library solicits gifts of books, periodicals and reprints and points out particularly that even single volumes or odd numbers or periodicals of little worth to the owner may be of value in completing valuable sets.

Price of Radium Reduced.—The Director of the United States Bureau of Mines recently announced that the cost of radium has been reduced from $120,000 to $36,000 a gram, through the work of the research bureau. The bureau has been engaged on the problem of the cheaper production of radium for the past year.

Nobel Prizes.—Announcement has recently been made of the award of the Nobel prize in chemistry for 1914 to Professor Theodore William Richards of Harvard University for his work in fixing the atomic weights of chemical elements and of the prize in physics for the same year to Professor Max von Laue of Frankfort, for his discovery of the diffraction of rays in crystals. The prize in medicine 1914 has been awarded to Dr. Robert .Barany of the University of Vienna, who has mode important investigations in the physiology and pathology of the ear.

Stereopticon Loan Library.—The United States Public Health Service announces that the service has established a stereopticon loan library, consisting of over 2,000 slides, the majority of which are original, dealing with public health problems. These slides will be loaned without cost to physicians, health organizations, educators, welfare workers and others on application to the service. They cover such subjects as Alaska, 83 views; children and children's diseases, 50 views; health exhibits, 90 slides; hookworm 90 slides; Indians, 50 views; leprosy, 45 slides; living conditions, a small number; malaria, 275 views; milk, 80 views; mouth hygiene, 12 slides; parasites and organisms, over 200 views; pellagra, over 500 views; rural schools, 10 slides; service general, 320 slides; small-pox, 90 slides; trachoma, 120 slides; tropical diseases, 49 views; tuberculosis, 100 slides; typhoid fever, 350 views; yellow fever, many slides as well as slides of other miscellaneous subjects. These slides are 3½ by 4 inches and will fit almost any lantern. Catalogs of these views will be sent on request, out of which selections may be made or the service will make the selections on any subject as desired.

CHILD WELFARE EXHIBITS.—The Children's Bureau of the Federal Department of Labor announces that a bulletin has been prepared to serve as a reply to the many inquiries about child welfare exhibits which may be had in single copies for the asking. To those who are planning a baby show, a children's health conference or to communities which expect to observe Baby Week next March, the bulletin offers the benefit of expert advice and practical experience. It is full of suggestions for communities of all sizes but advises that no community undertake a child welfare exhibit without the co-operation of all social agencies of the community. Instances are given of the benefit to communities in the way of increased appropriations, permanent improvements and a combination of social welfare agencies to secure and carry out a program of legislation and welfare work following child welfare exhibits.

PERSONALS.—Dr. R. LEIGHTON LEAK (A. M. C. '98), Syracuse, N. Y., has been appointed physician in charge of the Syracuse Psychopathic Hospital succeeding Dr. Hersey J. Locke resigned.

—Dr. EDWARD J. CALLAHAN (A. M. C. '14), is engaged in active practice at Schuylerville, N. Y.

—Dr. JOHN T. HOGAN (A. M. C. '14), has opened an office at 1813 Fifth Avenue, Troy, N. Y.

—Dr. EDWIN H. HUNTINGTON (A. M. C. '14), is practising at Cairo, N. Y.

—Dr. THOMAS H. MCGRAIL (A. M. C. '14), is engaged in active practice at 33 Clinton Avenue, Albany, N. Y.

—Dr. WILBER S. NEWELL (A. M. C. '14), is located at 908 Midland Avenue, Syracuse, N. Y.

—Dr. JAMES I. SCHOONMAKER (A. M. C. '14), is practising at Coxsackie, N. Y.

—Dr. WILLIAM I. WALSH (A. M. C. '14), has opened an office at 149 Eighth Street, Troy, N. Y.

DIED.—Dr. IRA HARRIS (A. M. C. '81), formerly of Albany, N. Y., died in Tripoli, Syria, November 25, 1915, aged sixty-nine. He was appointed American consul to Tripoli by the late President McKinley.

—Dr. EUGENE J. GALLAGHER (A. M. C. '92), Yonkers, N. Y., a member of the New York State and Westchester County Medical Societies, died at the Polyclinic Hospital, New York, from renal disease, December 3, 1915, aged forty-six.

In Memoriam

OGILVIE DeVILLA BALL, M. D.

O. D. BALL, M. D.

Albany Medical Annals
January, 1916

In Memoriam

Ogilvie D. Ball, M. D.

Dr. Ogilvie D. Ball, one of Albany's oldest physicians, died at his home, 221 State street, December 15th, 1915, following a year's illness. Except for acting as consulting physician for St. Peter's Hospital, Dr. Ball had retired from practice a year ago, because of failing health.

Dr. Ball was born at Schuyler's Lake, Otsego county, N. Y., February 4, 1840, the son of Joseph S. and Janet F. (Mitchell) Ball, of Block Island. He was a descendant of one of the oldest families in America, tracing his ancestry back to Edward Ball, one of the settlers on old Block Island. One of his ancestors was related to Mary Ball, mother of George Washington, according to the family tracing of ancestry. He was graduated from Hartwick Seminary in 1858 and from the College of Physicians and Surgeons of New York city in 1867, with the degree of doctor of medicine. He began practice in Schenevus, where he remained for six years, moving to Albany in 1874. Three years before he married Miss Adelaide Van Derzee of Trumansburg, N. Y.

He was a member of the University Club and of the Unconditional Republican Club. He also was a member of the Schenevus Valley Masonic Lodge, and of the George Dawson Post, Veterans of the Civil War, of Albany.

Surviving Dr. Ball are his wife and a daughter, Miss Frances De Villa Ball.

Dr. Ball served with distinction during the Civil War, enlisting as a private, and later receiving his commission as lieutenant and quartermaster of the Third New York Artillery Volunteers. He was mustered out as assistant adjutant-general to the chief of artillery, department of North Carolina, when the war ended. He was a member of the exclusive Loyal Legion, composed of officers who served in the Civil War. During the war Dr. Ball was associated with Surgeon-General George M. Sternberg, and between them there existed a strong friendship which lasted through life. During the Spanish-American War, Dr. Sternberg sought his services and offered him a commission to take charge of the typhoid camp at Montauk Point, which Dr. Ball was obliged to decline on account of ill health.

In 1874, Dr. Ball was coroner in Albany county and also was a member of the board of pension examiners for ten years. In 1876, Dr. Ball received the honorary degree of master of arts from Union University.

During the forty-one years of his residence in Albany Dr. Ball became endeared to his professional colleagues, and was esteemed for his thorough knowledge of medicine, his progressive spirit and the unfailing evidence he gave of study of all scientific advance. He kept abreast of modern teaching and theories. By nature quiet and retiring, he avoided the contentions arising from the differences of opinion incident upon the adaptation of new schools of thought, and he sought no professional offices. In spite of this he accepted the position of demonstrator of anatomy in the Albany Medical College for four years in his earlier days, and also gave courses of lectures on various subjects, and for five years was an attending physician to the Albany Hospital Dispensary; and he had been consulting physician to St. Peter's Hospital since 1911. He was treasurer of the State Medical Society for several years, a member of the county societies of Otsego and Albany, and was president of the latter in 1894. His presidential address was upon "Cholera as a Water-borne Disease," and was an exposition of his interest in the general subject of the convection of infection by water. This led to his enthusiastic support of the plan to install a filtration plant for the water supply of Albany, which has resulted in such marvelous improvement in the health of the city.

His life was a fine and rare example of the best type of the physician. The high ideals which led him in his early youth to hazard his life in the defense of the Union, persisted, ever gained power through all the trials and worries of an extensive medical practice and were manifested in his attempts to defend his patients from disease and inspire in them the will for a better and saner living. Medicine was to him a sacred profession, not a business; and mercenary motives influenced him little. Splendidly indifferent to collecting his pecuniary reward, he was never careless or indifferent to the needs of his patients and devoted, wholeheartedly, all his rich store of knowledge and experience to their relief with unfailing enthusiasm and loving kindness. It is safe to say that there was no patient of Dr. Ball who did not receive both physical and moral benefit from association with the doctor, and those of them who are now living by virtue of his skill must feel that they had received from him more than they gave.

Dr. Ball entered the profession well prepared for it by a careful education. He remained an enthusiastic student of the theory and practice of physic even after old age slowly crept upon him. He was always ready and eager to enter into a discussion of any medical problem, even the newest, and his views were founded firmly upon a long and accurately observed experience and sound judgment. Always quiet and retiring he was not fully appreciated by the general public, but easily, and without conscious effort, he won his way into the hearts of those who knew him intimately. He had the courage of his convictions and, although modest, his was a strong, fearless character. His own strength imparted strength and confidence to his patients, weakened and apprehensive as the result of their diseases, and was a strong force for good in the whole medical fraternity, in which from time to time he filled many positions of trust. His publications were of high value, but not numerous, and his memory will live not so much in medical literature as in the respect and love of his colleagues and in the grateful and affectionate esteem of his patients, to whom he was ever the wise and kindly guide and friend.

He was something broader and greater than a physician. He was interested in many things outside of his profession, especially music, and was a naturalist of no mean attainments. Above all he was a genial, lovable man and one who could be depended upon under all conditions and circumstances, and there are many of us who are fully conscious that our lives have been enriched and enlarged by our friendship with Dr. Ball.

Henry Hun.

Medical Society of the County of Albany.—Memorial Meeting.

Dr. Ogilvie De Villa Ball—February 4, 1840-December 15, 1915.

We the committee appointed by the Medical Society of the County of Albany to give expression to its sentiments of respect and regard for Dr. O. D. Ball on the occasion of his demise have adopted this report, prepared by Dr. Curtis:

Dr. Ball ended his life with us December 15, 1915, at the age of 75. A native of Otsego County where his early life was spent, and the first years of his professional career, he has lived in Albany since 1874 and spent among us all his matured life. He was educated at Hartwick Seminary in his native county, and had the further training of army experience, for he interrupted his commencing study of medicine by enlisting in the soon after occurring outbreak of the Civil War. He entered the army as a private but soon achieved rank and served with distinction, being mustered out at the close of the war an assistant adjutant-general. He was a member of the Exclusive Loyal Legion. He was associated with Dr. George M. Sternberg, who was subsequently surgeon general of the army, and a life long friendship continued between them.

His medical instruction he received at the College of Physicians and Surgeons, and he took his degree from it in 1867, later supplemented by some close post-graduate work in New York, especially in the Demilt Eye and Ear Infirmary. He was given the honorary degree of Master of Arts from Union College in 1876.

After six years' practice in Schenevus in his native county, during which time he was married to Miss Adeline Van Derzee of Trumansburg, he came, in 1874, to Albany, and his life since has been with us. For five years, soon after he came here, he served on the staff of the Albany Hospital, and for about the same length of time was Demonstrator of Anatomy and lecturer on special subjects in the Albany Medical College. In 1894 he was President of this Society, and for years filled the exacting duties of Treasurer of the State Medical Society. His professional work has been that of the general practitioner and family physician.

All of us who have been associated with Dr. Ball in a common work and have come in contact with him in the study of cases or in the discussion of disease will bear testimony to his learning and diagnostic acumen. He was a persistent student and had so broad a knowledge of pathological conditions along with a ready grasp of the subject that his analysis was always illuminating. It is probable that the opinion of no one among his associates was given more respectful consideration. Along with general knowledge of medicine in its various branches and aspects he had the more rare capacity of its application to the immediate case.

Personally he had an agreeable manner, an unaffected courtesy, that was constant and unfailing. It did not desert him during the long period of illness; incapacitated physically he had the same kindly spirit toward those who came in to see him. He was always at the surface genial, good hearted, appreciative and helpful. He was always ready to do service, to do it effectively and with the manner of an agreeable way. With all his affability he was unaffectedly sincere.

It naturally came about that, informed, pleasant, good-hearted, without pretense, he made all his friends who had contact with him, and naturally he had a large burden of professional work. His forty years of life among us have been full years of friendship and of response to duty.

Albany has been greatly favored in having had the matured life of Dr. Ball in its medical service and its social life. The medical body has been honored and likewise favored by this erudite and responsive member.

For what he has accomplished by his life here and that will yet come from it we are grateful, and our memory of him will remain as of one who had much to contribute, had a capacity and ever a readiness to contribute, and withal a way always of good-heartedness and cheer.

Henry Hun, *Chairman.*
F. C. Curtis,
J. M. Mosher,
A. W. Elting,
Nelson K. Fromm.

St. Peter's Hospital—Memorial of the Staff.

Dr. O. D. Ball.

The Medical and Surgical Staff of St. Peter's Hospital, at a meeting held on December 21, 1915, ordered placed on their minutes the following tribute to Dr. Ogilvie De Villa Ball:

In the death of its Consulting Physician, Dr. O. D. Ball, St. Peter's Hospital has lost an old and proved servant and friend. We, his colleagues, respected, admired and loved him. He was a strong, courageous, right-minded man and yet of a sunny, sweet-natured and lovable disposition which endeared him to all. What his zeal and kindly interest did for the Hospital, what his genial, loving nature did for us, were very real results, but are hard to express in words. They were large factors in forming the "atmosphere" of the Hospital and the inspiration of its staff.

Although Dr. Ball's official connection with the Hospital was of comparatively recent date, his active interest in, and his sympathy with, it was continuous from the time of his first commencing practice in this city to his death. Not only did he treat many patients in the Hospital, but he was always ready to give counsel and encouragement to the various sisters-in-charge, when they asked advice, as in past years they often did, in regard to questions of administration and to the more delicate ones of medical ethics. His interest in the Hospital was keen and his advice and judgment were sound, and were of great value in the development and rapid growth of the institution during his association with it. Many is the former House officer who is now in his practice successfully applying those wise precepts, which he derived from the ripe experience of Dr. Ball. Many is the patient who had reason to rejoice that he was under the care of so skillful and so kindly a physician. Far and wide has extended the quiet, but beneficent, influence of this modest, noble man.

Henry Hun,
President.

Andrew MacFarlane,
Secretary.

CHARLES M. LEFLER, M. D.

DR. CHARLES M. LEFLER, dean of the Medical Fraternity of Gloversville, died at his home, No. 27 Elm street, at six-thirty o'clock Wednesday evening, October 6th. Dr. Lefler had been ill for the past year and he had done little practicing for that period. He had been able to be about his home until Wednesday morning when his condition took a turn for the worse and he gradually sank until death came.

Dr. Lefler was born at Fayette, Seneca County, December 3, 1847. At twelve years of age he attended a military school in Troy, N. Y., and later took a preparatory course at the Fort Edward Institute. In 1866, he entered the Albany Medical College where he was graduated in 1870. He located in Gloversville in 1871 and practiced there until his death.

Through the nearly half century that he had been in Gloversville, he had always been regarded as one of the foremost physicians of the city and he had contributed much to its medical development. In years past, Dr. Lefler sought official positions in medical circles and had served as county physician, city physician and coroner. He had been a member of the board of education and served one term as president of the board. He was a member of the State Medical Society and of the Fulton County Medical Society.

In church circles, Dr. Lefler was prominent and was a consistent worker in the First Methodist Church. His father was a Lutheran minister and early in life the doctor embraced that faith. Later, after he came to Gloversville, he was transferred to the Methodist church. At the First Methodist Church, Dr. Lefler had served as superintendent of the Sunday school and he was also a member of the choir of the church.

Dr. Lefler had no children, and the only close relative surviving is his widow, Mrs. Julia Ida (Sands) Lefler.

ROBERT J. PALMER.

IRA HARRIS, M. D.

Dr. IRA HARRIS, a former resident of Albany and a graduate of the Albany Medical College of 1881, a missionary physician to Tripoli, Syria, since his graduation, died on November 25th, 1915, at Tripoli, in the seventieth year of his age. Dr. Harris was appointed consular agent at Tripoli by the late President McKinley. He is survived by his widow, a son, now a student at Princeton University, and a daughter, Mrs. Burl T. Schuyler, missionary at Julludur, India.

A history of the life and experience of Dr. Harris was most entertainingly given in a letter to his medical class on the occasion of the thirtieth anniversary in 1911, as follows:

" Most of the year following my graduation I spent in Europe, to use a favorite English expression, 'walking the hospitals' and getting what good there was out of such an occupation. During that time I for six weeks took charge of a doctor's practice in one of the midland districts of England, and it was a strenuous six weeks. I saw enough to see that there could be no better reward for a man's work, or more satisfaction for one's efforts than in England. The doctor gets very near the heart of things, and there is no fear of another taking his place just as long as he can work; there is no running after the new fads that takes the life out of the profession these days. On my return to America I settled at Fayetteville, N. Y., remained there until August, 1883. On the third of November of that year I sailed for Tripoli, Syria, to join the Presbyterian Board of Foreign Missions to take charge of their medical work. During the spring of 1896 I had charge for three months of the work of the American Red Cross in Asia Minor among the Armenian sufferers from the fiendish efforts of the Moslem population to exterminate every Christian male above the age of twelve years, and from what we saw they accomplished very effectively their endeavors, for we saw and gave aid to thousands of women, girls and children, but very few men, that had survived the effects of the club, knife and the gun. After the massacre three years ago at Adana I went to give what assistance I could, but as the work had been organized before I arrived, there was no need of more help. For the past twelve years I have been American consular agent at this port, at the present time I have charge of the consulates of United States, England, Germany, and Holland, so every Sunday I have the right to hang the official flag of these countries from the roof of our house, and it is a great comfort to know we are not outside the world even if we are a long way from home. I have two children. My daughter has the command of four languages—English, French, German and Arabic. She graduated in 1908 at the Woman's Medical College, Philadelphia, and after a year in the Woman's College Hospital in that city she was appointed by the Presbyterian Board of Foreign Missions to be my assistant in my hospital work here. My son, now sixteen years of age, is training his mind for some useful walk in life. When I look over the numbers that have received treatment in our clinics during the past twenty-seven years I am astonished at the numbers, and wonder how one man could do so much, and I do not say this with any thought of boasting. There has been an average of 7,351 new cases, 502 operations, and 14,902 treatments annually. We have a hospital with forty beds, a trained American nurse, two American doctors, and native assistance. We do *any* and *all* kinds of surgical cases, that of disease of the eye comprises about one-third of the cases, cataract and diseases of the lids, surgical and otherwise—about half of these. Operations on the neck we have had 3,481 cases, many large goitres and glands; 356 bladder calculi, ninety-six per cent on children from eleven months to fifteen years of age. The largest stone removed from an adult weighed 2,889 grains, the smallest from a child aged eleven months, thirty-five grains. Have had several cases from two to eleven months of age who have passed small stones, or have removed them from the urethra, one case of a stone lodged near the opening that caused gangrene of the penis. Stone cases in women, three; girls, five. Of course you need not copy all the above in your report, use what you need, and confine to the balance any way you wish. Tell the boys I congratulate all who are left of the fifty-eight that graduated in our class of '81, and tell them life is a grand thing, but what is better in this world than that life has been honest, true, ever ready to lend a helping hand to the poor, the sick and sad, if one can look back over the thirty years and say 'I have ever done my duty, I have done all I could to make every one with whom I have had to do, happy even in sickness and death,' that is better than wealth, or anything the world can give. Tell them I expect, D. V., to meet them in 1912 or 1913. If I have been gathered to my fathers, I will meet them in the great region beyond the veil where so many of the class of 1881 have gone. What a meeting that will be; I have no dread as to the future; when the great change comes I am ready, I know I have done all I could to make the world better; it has been little, but that little I have given with my whole heart, so with salaams to you all, am as ever."

Lansing Van Auken, M. D.

Rev. Lansing Van Auken, M. D., pastor of the First Presbyterian Church, Watervliet, died November 27, 1915, at the parsonage, following a brief illness. Several weeks before his death, Dr. Van Auken suffered a slight stroke of paralysis, but he was able to attend to his duties. He was born in Voorheesville over fifty-five years ago and he was educated in the schools of that place. When a young man he entered Union College, graduating from there in 1884 with the degree of A. B., and in 1887 he was ordained as a Presbyterian minister from the Theological Seminary at Auburn. Since his ordination he has been pastor of the Watervliet Church. In 1888 Dr. Van Auken entered the Albany Medical College and in 1892 graduated.

Besides being a minister of the Gospel and serving as pastor of the Watervliet Church, he had also a wide medical practice. Rev. Dr. Van Auken was an advocate for good, clean government, and he was a persistent worker to get electricity generated from the water powers of the State. He was an inventor of several devices and of a spring shock absorber, used on automobile tires. Dr. Van Auken was the main advocate of the commission form of government, voted for and defeated at the last general election. He was a charter member and one of the first officers of the Watervliet Municipal Improvement League. He was also a member of the Watervliet Chamber of Commerce, and was also a member of Evening Star Lodge, F. and A. M., and Hudson River Chapter, R. A. M., and also a member of the Albany Presbytery. His widow, one daughter, Mrs. Irwin Johnson, of Troy, and one brother, Frank Van Auken, of Guilderland, survive.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

A Text Book of Surgery for Students and Practitioners. By GEORGE EMERSON BREWER, A. M., M. D., Professor of Surgery, College of Physicians and Surgeons, New York; Surgical Director, Presbyterian Hospital; Consulting Surgeon, Roosevelt Hospital, assisted by ADRIAN V. S. LAMBERT, M. D., Associate Professor of Surgery, Columbia University; Attending Surgeon, Presbyterian Hospital; and by members of the surgical teaching staff of Columbia University. Third edition, thoroughly revised and rewritten. Octavo, 1,027 pages, with 500 engravings and 23 plates in colors and monochrome. Cloth, net, $5.50. Lea & Febiger, Publishers, Philadelphia and New York. 1915.

In this the third edition of this work the author has adopted the scheme of having several collaborators, each of them responsible for certain parts of the work. In this way the volume has been completely revised and rewritten by the author and his associates in the surgical department of the College of Physicians and Surgeons It is of course quite impossible to cover the subject of surgery in a comprehensive manner in a single volume, which of course necessitates a more or less abbreviated presentation of many subjects. The book is especially designed for the needs of medical students and practitioners as a text-book rather than as a treatise upon surgery. There are 1,027 pages of subject matter and 523 illustrations. A special feature is a series of Lumiere colored photographs which really furnish most satisfactory illustrations. It is of course quite impossible to introduce much originality into a single volume of surgery and the reader and student should be satisfied with a general presentation of the subject without any great detail. The work will undoubtedly appeal to medical students and as a general basis for an introduction to surgery will serve the purpose well. That the volume is a popular one is evidenced by its appearance in a comparatively short time in three editions.

A. W. E.

Traite Medico-Chirurgical de Gynecologie. By F. LABADIE-LAGRAVE and FELIX LEGUEU. Quartrieme Edition, Revue et Augmentee. Avec 491 gravures dans le texte en noir and en couleurs. Paris: Librarie Felix Alcan, 108, Boulevard Saint-Germain, 108. 1914.

The first edition of this work appeared in 1898 when the science of gynecology as a specialty was largely dominated by medical considerations. The second edition appeared in 1901, the third in 1904 and now, after the lapse of ten years, this, the fourth edition, appears. This work extending, as it does, over a period of sixteen years represents essentially all the modern development of gynecology and its transformation from a medical to a surgical specialty. The authors have, however, never lost sight of the fact that there are medical aspects of gynecology, especially those which pertain to diagnosis and post-operative management, and in each edition these considerations have received appropriate treatment. The French were among the first to specialize in gynecology and they have always been valuable contributors to the literature of the subject. The volume which comprises 1,333 pages of subject matter, with 491 illustrations, is subdivided into two parts. The first deals with etiology, diagnosis and general therapy. This might be called the medical side of gynecology and occupies almost two hundred pages of subject matter. The second part of the volume presents surgical gynecology as it has developed in all its phases. This is subdivided into eleven chapters dealing with all the gynecological lesions beginning with malformations and congenital deformations and ending with the pathologic and physiologic relations between the genital and the urinary apparatus. Throughout the entire volume there is abundant evidence of a thorough study of the literature of the subject with a very large number of references to the literature. The volume is written in the attractive and striking fashion so characteristic of the best French literature and is a really comprehensive presentation of the subject. That it has been well received is certainly evidenced by its appearance in an improved form in its fourth edition, which we believe will receive well merited recognition from the profession. A. W. E.

NEW YORK STATE MEDICAL LIBRARY

Edited by Frances K. Ray

Principal accessions of the month:

Handbuch der pathologischen Anatomie des Nervensystems, herausgegeben von Flateau, Jacobsohn und Minor. 2 Vols., 1904.
Neveu-Lamaire, Maurice. Parasitologie des Animaux Domestiques. 1912.
Ribbert, Hugo. Lehrbuch der allgemeinen Pathologie und der pathologischen anatomie. 5. aufl., 1915.
Carrington, T. S. Tuberculosis Hospital and Sanatorium Construction. 3d ed., 1914.
Dorland, W. A. N. American Illustrated Medical Dictionary. 8th ed., 1915.
Gorgas, W. C. Sanitation in the Panama. 1915.
Kelynack, T. N. ed. Defective Children. 1915.
La Motte, E. N. Tuberculosis Nurse. 1915.
Parsons, J. H. Introduction to the Study of Colour Vision. 1915.
Shipley, A. E. Minor Horrors of War. 2d ed., 1915.
American Urological Association. Transactions. Vol. 8, 1914.
American Proctologic Society. Transactions. Vol. 17, 1915.
Philadelphia Academy of Surgery. Transactions. Vol. 17, 1915.
Roosevelt Hospital, New York. Medical and Surgical Report. 1910-1914.
Royal Academy of Medicine of Ireland. Transactions. Vol. 33, 1915.

VOL. XXXVII FEBRUARY, 1916 No. 2

ALBANY
MEDICAL ANNALS

Original Communications

THE ADMINISTRATION OF THE CARBONIC ACID BRINE BATHS (NAUHEIM BATHS).

Read at a meeting of the Saratoga County Medical Society, Saratoga Springs, N. Y., October 22, 1915.

BY JAMES HENRY HONAN, M. D.,
Of Bad-Nauheim, Germany, and Augusta, Ga.

The administration of the CO_2 brine baths is a subject requiring much preparation and thought on the part of the physician who prescribes them, in order that the greatest benefits should result for his patients.

First, the physician must understand the condition of his patient and whether such a course of treatment is indicated.

Second, he must know the mechanical and physiological action of the baths.

Third, he must keep a close watch on the patient to determine his individual needs—to know the effects of the baths from day to day on the individual patient, and to make such modification in the treatment as the case requires.

The physician must determine the kind and the strength of the baths, not for an entire course but from day to day, as he is guided by his observations of the patient.

He must be familiar with the action of the salts, of the carbonic acid gas, of the temperature; and what combinations best give the results he is striving to obtain.

Aside from the nature and temperature of the baths, there are other important matters, namely, the duration of each bath, the depth of each bath, the grouping of the baths in the series, the number of baths for the respective course, the length of time for the course of treatment, the question of the "after-cure," and the frequency of the repetition of the course of treatment for the individual patient.

The bath designated at the Spa as the "Thermal" is the one with which we generally begin the course. Occasionally we find children or very frail patients for whom it is necessary to give at the beginning, the *sool-bad,* or simple sodium chloride salt bath. All the "Thermal" baths have the full complement of salts but no free CO_2 gas. The average patient takes six or eight or nine of these before beginning the Thermal Sprudels which have all the salts of the Thermal, differing from the Thermal in that the waters are a saturated solution of the CO_2 gas. After eight to ten of these Thermal Sprudels some patients are promoted to the Sprudels, which baths are usually continued through the course.

The Sprudel, besides containing all the salts, is a supersaturated solution of CO_2 gas.

The duration of the bath varies according to the condition and improvement of the patient. It is my custom to begin cautiously with patients who have not taken the baths before, making the time of the first bath not more than five or six minutes and increasing the time very gradually until the period of immersion reaches eleven to eighteen minutes, depending on the reaction after each bath. It seldom requires longer than eighteen minutes to obtain the maximum reaction.

The temperature of the CO_2 brine bath depends on the condition of the patient. The general rule is to administer the baths at the neutral zone of temperature 33° to 34° C. or 92° to 94° F., at which temperature we depend almost entirely on the salts alone or on the salts and CO_2 for the physiological action. Patients suffering from high blood pressure due to overeating will at times not respond readily to the baths. In such cases it is often necessary to increase the temperature of the bath to cause a more prompt dilatation of the peripheral capillaries. In subnormal blood pressure cases it is often necessary to reduce the temperature of the bath below the neutral zone in order to add an extra stimulus to the flaccid arterial wall.

There is a prevalent idea that a *certain number* of baths constitutes a course and that all patients must take that number to receive benefit, which experience shows to be erroneous. The different pathological conditions vary so much that one cannot foretell how many baths will be required to bring about an improvement, and since the temperaments of the patients vary widely, it is impossible to tell in advance how the baths may affect the individual. Allowing for all these variations the patient may require from 18 to 26, or in rare cases even 30, baths.

One of the things to be insisted upon is that there should be a month's time for the treatment. I repeatedly refuse to take patients who have but two weeks to spare, as in the majority of cases it would be a waste of their time and money. Then again, if they think their health of so little importance that not more than two weeks for its care can be spared from their social or business life, they will probably be regardless in other ways of the physician's advice and difficult to do anything for, as far as lasting results are concerned. It is only the exceptional case which shows indications for a short course of treatment.

Some patients, I find, should be kept on Thermals for the entire course, others should have both the Thermals and Thermal Sprudels and few or no Sprudels. It is not advisable to begin a course with the Thermal Sprudels, or the Sprudels or change from the Thermals to the Sprudels. In some instances, when I am not satisfied with the effects of the Sprudel, I put the patient back on the Thermal Sprudels, or the Thermals.

Some patients are entirely cured after one or two courses of treatment, others must have a course of baths at regular intervals to keep them going from year to year. A great many patients had not missed a summer at Bad-Nauheim in 20 or 25 years until this year. In this way their cardio-vascular efficiency has been maintained.

A great part of the general public has a false impression of what constitutes a Nauheim bath, attributing too much importance to the carbonic acid gas and too little to the other valuable features and well satisfied with a fizz in the tub. There is a general belief that the small disk or package labeled "Nauheim bath" bought at their druggist's is the imported product from the Nauheim springs. This mistake is not to be wondered at, or that even physicians inquire from me as to whether these are real or contain the essential ingredients.

This so-called Nauheim bath differs materially from the real bath of that name. It may, however, have some efficacy when properly precribed and administered.

It is my opinion that a bath cannot be properly charged by the generation of the carbonic acid gas in the tub, and that the salts in the disks are not of sufficient quantity to be effectual.

Baths made with all the essential mineral ingredients of the Nauheim analysis, have been used in thousands of cases by Prof. Brieger, Ottfried Müller, and others, with satisfactory results, which is evidence that an effectual bath can be made when all the essential ingredients are employed, whether the ingredients are obtained from the chemist or from the springs. The *essential* salts for one bath weigh a little more than thirteen pounds.

In my own practice in America, I have used the salts from the original springs with as good results as I obtain at Nauheim. There is ample evidence, however, of the therapeutic value of the properly made artificial bath.

Although I have made no continued observations of the Saratoga Springs, to my mind there is every reason to believe that the Saratoga waters with slight modifications make a bath of great efficacy, differing in no essential respect from the Nauheim springs and producing satisfactory therapeutic results. The chief difference which I find in giving the treatment in this country and in Europe, is that abroad the majority of my patients are farther away from business and family cares—they are less unwilling to go to the mountains or some quiet place for some weeks or months of rest and at least they have the benefit of a voyage of a week or ten days. One of the difficulties in our own country is that business associates follow the patient and disturb him while he is having his treatment. He is inclined to keep a hold on his business affairs at home, or to hurry back to resume active duties as soon as he begins to feel better. I am convinced that with the co-operation of the patient, and the proper care on the part of the physician as to the nature of the baths and their administration, as good and permanent results may be had in America as elsewhere.

The "Nach-kur" or after-cure is frequently advised. This is often necessary for patients suffering from a very weakened condition of the myocardium. After the first course of baths is finished, the patient is sent away to some restful place where there is little to stimulate active exercise, for a stay of from two to twelve weeks. The exercise of all such patients must be regulated accurately and controlled by the physician as to length and pace and the increase. After such an interval, the patient returns for an after-cure or an additional series of from ten to fourteen baths.

To obtain the best results from the CO_2 brine baths, the physician must be thoroughly familiar with the physiological action of the baths. He must know what condition requires a bath of six minutes and what condition requires a bath of sixteen minutes. He must know why, when and how much to reduce or increase the temperature of the bath. He must know when to change from the Thermal to the Thermal Sprudel or when to change from the Thermal Sprudel to the Sprudel or when the Sprudel is inadvisable. These facts can best be obtained by the study and observations of patients in the bath. Such observations of patients during immersion, give the physician the clearest conception of the physiological action of the baths.

The CO_2 brine baths should be administered or prescribed only by physicians who have given thought and time to the subject and who employ the greatest possible care and understanding in meeting the requirements of the different pathological conditions which their patients present. The public as well as medical men must realize that a therapeutic measure so potent for good, may also do harm, if not properly administered.

It is my custom to see the patient after each bath, before deciding on the next bath, whether to continue or change the full bath, half bath or three-quarters bath prescribed, whether the temperature should be increased one-half degree or lowered a degree. To find out whether the patient has any feeling of oppression or weight on the chest during the bath, whether he had any difficulty in breathing while in the bath and to determine whether the duration of the bath should be increased or diminished, whether to administer one bath and a rest day or two consecutive baths with a rest day, or whether three baths consecutively are indicated. Inquiring each day into the sleep, appetite, rest, relaxation, heart gymnastics, exercise, bowel- and kidney-function, the physician is enable to correct any little detail which points the wrong way. Not the least of the advantages to be gained is the feeling of confidence given to very ill patients who, knowing the gravity of their condition, see that the physician is giving time and thought to every detail for their restoration to health.

In some cases it is important that the physician shall see the patient in the bath. It is my practice to see most of my patients in their first bath. This is particularly true if there is evidence of cardiac insufficiency. I usually take the pulse before the bath and during the greater part or whole of the time of immersion. In this way one is able to discover any slight change in the pulse, any distress of breathing, or other signal for apprehension or for modification in the treatment.

The attendant should be well trained in every detail of the administration of the bath and be a careful observer of the patient, that any unfavorable sign that the patient is not taking the bath well, may be reported to the physician at once.

The patient must be quiet in the bath and the attendant should be instructed not to converse with the patient or in any way tax or excite him.

I have had to dispense with the services of more than one otherwise very good trained nurse who refused to see the importance of this instruction and insisted on keeping up a lively chat with the patient.

The lengthened diastole can best be observed with the stethoscope over the precordia, hence the stethoscopic examination should be made after each bath.

The CO_2 brine baths should be given at a spa or in an especially prepared institution as their proper administration requires special equipment.

The steam-coil or hot-water-coil must be at each tub, in order that the large towel thrown over the patient as he steps out of the bath may be thoroughly warmed.

The individual patient must have personal attention at each bath and this attention can be much better controlled in an institution or at a spa. Besides lack of equipment, the principal objection to administering the baths in the home is the patient's inability to control his time. The rest and relaxation after each bath, necessary to the best effects, cannot be obtained in the home where the patient is aroused by every ring of the telephone or door bell, where every sound reaching the ear about the house has a certain significance and may arouse a train of thought that is more or less exciting to the patient and makes relaxation impossible. If the patient is away from home better control can be kept on his time, his rest and his exercise.

One hour to an hour and a half's *rest* in the recumbent position, after each bath, is a very necessary auxiliary of the bath. It permits of the readjustment of the circulation after the changes which have taken place in the bath. It also quiets the nervous system and even a restless patient soon learns to enjoy his hour of rest and relaxation. The patient returned to his room, and having removed his clothing, should lie quietly in the darkened chamber and relax every muscle. His mind should be kept as inactive as possible during the time of rest. Though sleep is not essential, it is all the better if the patient loses consciousness.

On this my second visit to Saratoga Springs, I realize more fully what you have here,—springs affording the greatest possibilities, the advantage of state ownership and control, a Reservation Commission consisting of able men whose efforts and time are a generous gift to the state. When I see what this Commission and the efficient Medical Director have done with the small sums put at their disposal, how inadequate and petty the appropriations are in proportion to the needs, one can but regret that there should be further delay in setting aside adequate sums, reaching into the millions, for the proper and adequate development of Saratoga Springs. The appropriations should be large enough to enable the Commission to eliminate all undesirable features regardless of temporary loss and to make the development along therapeutic lines with plans for the future, though there be no considerable pecuniary returns for some time from the investment. The Commission should not be hampered by having to show large financial earnings for the next few years.

With sufficiently large funds at their command, this development might go on for ten, fifteen or even twenty years, every year yielding large therapeutic dividends. At the end of twenty years, Saratoga Springs would then be, it is my opinion, one of the greatest spas, one of the greatest health resorts of the world, ——it will then be rich enough to pay for itself in other than health-giving currency.

When one sees the millions of dollars employed in constructive work in America, when one sees the great fortunes left in bequests every year, we wonder how long the citizens and statesmen of our country will continue to neglect the greater opportunity of these springs.

It is to be hoped that we may soon see adequate provisions and conditions for the fulfillment of the great promise of Saratoga Springs.

THE PREVENTION OF FEEBLE-MINDEDNESS.

Read before the Sixteenth New York State Conference of Charities and Correction, Albany, N. Y., November 17, 1915.

By MARTIN W. BARR, M. D.,

Chief Physician of the Pennsylvania Training School for Feeble-minded Children, Elwyn, Pa.

Feeble-mindedness is a generic term covering every phase of defect—moral as well as mental—and for this reason I use it advisedly as one needing to be better understood by the general public.

After years of misunderstanding, even stolid indifference, the world is at last awakening to the fact that there is an element of defect penetrating and permeating every grade of society, from hut to palace.

For this not only is there no cure—for that which the cradle rocks the spade will cover—but also as a sure agent in transmission, its reappearance through successive generations is inevitable.

Heredity is as truly a law for humankind, as it is well recognized to be for lower-animal, and for plant life.

Defect once permitted to invade a lineage can never be *wholly* eradicated; lessened materially, and even reduced to a minimum it may be, but sooner or later it will surely reappear. The facts which records present of its startling increase within two decades, surely show the need of restriction, and that legal protection necessary to prevent social degeneration.

The Registrar General's last statistics in Great Britain show that of a population of 36,070,492—161,963 were returned as suffering from mental infirmity—106,660 being insane and

55,303 mentally defective; showing an increase of insanity 27.3 per cent, and of mental defect 13.2 per cent.

Our latest statistics reveal the fact that not less than ten per cent of the present population of the United States is mentally defective.

There are now 200,000 feeble-minded in New York State; and a large number of these as drunkards, drug-addicts or defective delinquents, equally a menace to society, demand *permanent* sequestration.

There are, in round numbers, 750,000 children attending school in New York City; of these, 15,000—two per cent—are mentally defective in greater or less degree.

It is estimated that two per cent of all school children are feeble-minded, sixty-five per cent of which being due to heredity.

Some 21,000 of the feeble-minded and epileptic are provided for by twenty-seven States in thirty-seven institutions; in addition, some 1,000 are cared for in private schools. Therefore, there are at least 328,000 mental and moral defectives at large, perpetrating, unrestrained, the defilement of the race.

Throughout the entire United States no less than $94,000,000 is annually spent in the care of the insane, and $90,000,000 for the feeble-minded; making a total of $184,000,000 expended, yearly, upon our helpless, hopeless population.

The percentage of mental defect among the foreign element in the city of New York, where our immigrants are mainly admitted, is 2.48 times greater than that of the native-born. A study made there in 1912, of the alien insane and feeble-minded cared for in the State hospitals, shows no less than 13,163 foreign-born patients. For these, at a cost of $262 per capita, the annual expenditure amounted to $3,448,707, and as the average hospital age is eleven years, the sum of $37,935,766 will have been paid by the State at the end of that period for the care of mentally defective and diseased aliens.

There can be no doubt but that the physiologic, psychologic and sociologic researches of the 18th and 19th centuries have, within the sixty years portrayed, certainly found practical results in the increased *protection* provided for *defectives.* But the greater aim of *protection* of the *race* from contamination and degeneration has hardly been considered.

A glance at the exposition which science has given in relation to cause and effect, may make clear the means by which the ultimate suppression of so great an ill may best be attained.

That heredity is naturally a dominating factor in all life is clearly proven in the researches of Mendel, which exhibit, unerringly, how definite characters are formed in the individual, and how directly they are transmitted; so that descendants to at least the fifth generation may develop the characteristics of their forbears in greater or less degree. Not that the child will necessarily exhibit actually the same defects or qualities of the parent, but it does inherit a strain, be it good or bad, which will be stimulated or kept in abeyance according to the prepotency of connection.

Science, following up this principle, has shown furthermore that by a careful study of family history, recognizing peculiarities or traits lacking, it may be possible to *suppress,* but not to *eliminate* this strain. The Mendelian law clearly affirms that the germ plasma of normal male and female contains a "determiner element" for every tissue of the body; and when these "determiner elements" are of equal potency, and blend perfectly, the descendants will possess characteristics of both parents. Whenever there is a defect in the germ plasma in one parent, the analagous "determiner" of the other will assert itself, and the child inherits the stronger characteristic, be it good or evil. Thus it is not infrequently observed that apparently normal persons produce feeble-minded children; or there are families where some members are bright, and one or two, for no apparent reason, feeble-minded; while on the other hand is seen a normal child, the offspring of parents—one normal and the other abnormal. Such are clear examples of the prepotency of the infusion of pure blood; the taint is there all the same, in abeyance, ready to respond to the first call or inheritance or accident.

This is especially to be noted of mental defect. Imbecility will breed imbecility; and where there is a trace of feeble-mindedness in a family it is sure to materialize, the defective "germ plasma" producing an abnormal; insanity or defect—mental, moral and physical—inevitably finding a corollary in after history.

Recently my attention was called to a family where both parents being feeble-minded, there were twenty-two imbecile children; in yet another were eighteen idiot children—also of defective parents—the community in which these latter lived, taking pride in exhibiting them as curiosities. In one family, in four generations, there are thirty-four imbeciles; and two other families, each with an idiot mother, show in the one seven, in the other nine illegitimate children. Another case I have under my care is that of a feeble-minded girl who suddenly became insane. She has three imbecile sisters—one a pronounced nymphomaniac. The mother and her two sisters (the latter harlots) are all feeble-minded; and both father and grandfather are incurably insane.

Surely some one should have suggested that all these cases required surgical aid; yet no steps have been taken to that end.

Venereal diseases, both directly and indirectly, are potent factors in the production of feeble-mindedness; nullifying the wage-earning capacity of the father, and reducing the poor, innocent mother to a state of hopeless invalidism.

This destruction of domestic happiness, lowering the whole *morale* of family life, is finally visited on the unborn child, who enters life the diseased, starved victim of an unhealthy heredity and environment.

These so called social diseases are not self-eliminating.

Syphilis is fitly named the "King of Abortionists" and Gonorrhea the "Queen of Sterility."

In 4,588 deaths from syphilis, 2,101 died before reaching the age of five years; proving that almost one-half were hereditary. In 18,779 cases of epilepsy, ten per cent was attributed directly to syphilis; as was also twenty per cent of 187,791 insane cases. Of 64,000 cases of blindness, twenty-five per cent was traceable to gonorrhea.

There are 500,000 public prostitutes in the United States, and 1,000,000 secret prostitutes, who bring forth feeble-minded children; and all are infected with gonorrhea or syphilis, or both. And it is estimated that 15,000,000 men are infected each year and they in turn infect the same number of women.

In a study of harlots numbering 424—eighty per cent plus, were found to be distinctly imbecile; their mental age never exceeding twelve years. The twenty per cent adjudged normal were found to be unable to carry on a consecutive conversation; and, never reading papers or books, were absolutely ignorant of the ordinary topics of the day. A large majority of the whole had contracted venereal diseases, and were pronounced alcoholics and drug-addicts.

Of some studies made in the Juvenile Courts, numbering 1,487—sixty-one per cent were found imbecile beyond a peradventure, their mental age averaging from seven and one-half to eleven. Of these, over fifty per cent were victims of venereal diseases.

A conservative estimate is that 25 per cent of the inmates of prisons are irresponsible imbeciles, victims of suggestions of stronger minds.

Much of the feeble-mindedness among the lower classes may be traced to the well-meaning but misdirected efforts of many charitable homes and societies, who, caring for children until they reach the emotional age of eighteen or less, turn them adrift when they most need protection and direction. At this most critical period, when malleable, and succumbing readily to suggestions good or evil—usually the latter—both sexes make the most of a newly acquired freedom, and, eager for excitement, with the sexual fires aflame, they soon, in drifting to the bad, find their mates in connections licit or illicit as chance may provide, and reproduce their kind. Earning a scanty living wage—if any at all—with none of the real comforts of life, is it surprising that the majority of the offspring of such conditions should be defective?

Of the causes of feeble-mindedness, in addition to those already considered, unfortunate results may be traced to the condition of the mother during gestation, and to the abuse of drugs and to alcoholism—which latter, with its deleterious effect on cell and germ-life, may, even in moderation, according to Darwin, Gladstone, Cobden and Comte, accomplish more harm than a combination of famine, pestilence and war.

In this summary of cause and effect, one cannot fail to recognize the necessity for the enforcement of measures which experience has demonstrated as absolutely needful steps toward prevention, viz.: the *separation*, *sequestration* and *asex-*

ualization of the feeble-minded; and further revision of marriage laws forbidding increase.

Separation protects society from contamination, and the defective from a world where, brought into competition with normal people, be it in the home, in school or in business circles, he is forever misunderstood and driven backward. Separation, first, of normal from backward children, in the schools, and the massing in classes of those of similar mental capacity: second, the segregation in institutions of those proven defective, that they may be trained in occupations proven possible for them—industrial, manual or intellectual—such as farm and house work, shoe-making, carpentry, dress-making, painting or printing; in these aiding also in the living expenses of their community.

In order to effectually accomplish this the sequestration must be *permanent;* otherwise, *the trained imbecile is a greater menace to society than is the untrained,* in that with latent powers and talents developed to the point of concealing defect, he is no longer recognized, and has opened to him a larger field for the indulgence of instincts—be they criminal or merely emotional.

Training schools for defectives, without the protection of permanent sequestration, find themselves twice defeated in their aim: not only that of preventing increase, and of lessening crime, but in the loss of trained laborers aiding in self-support and in the care of the helpless. For this evil, legislation offers no remedy, no state in the union providing for indeterminate sequestration.

Why might not the Government set aside a reservation for such? Surely they are as deserving as the Indian or the Negro; and such provision would be far more reasonable and economical than penitentiaries, for which there would then be no need.

Asexualization has, at last, won its way to legal recognition as the only assured means of dealing with present numbers; not only preventing increase, but lessening the exaggerated sexual impulses and contributing to the happiness of the individual; thus insuring a certain amount of freedom in either home or community life.

In this matter, the past decade seems to present a new trend of thought, in that what was formerly termed brutality, is beginning to be viewed as simply the safe-guarding of the innocent and the preservation of the Nation from racial degeneracy. Some twelve States have concurred in affirming the necessity for sterilization; Indiana leading the way in finally gaining the endorsement of legislative action.

The application of the principle in these States cannot fail to correct prejudice and misunderstanding in the mind of the general public, making clear the nature and simplicity of an operation involving no danger and almost no discomfort to the subject—and insuring benefit to all.

The removal of the organs is not always essential, but is to be preferred as giving absolute security; and when performed upon youth, desire almost entirely ceases, or at least is held in reasonable abeyance.

There is no reason why the operation should not be so safeguarded as to prevent license. It should be permissible only after study of and testing by accredited alienists and surgeons, and this is best attained in the grouping of numbers by separation and segregation.

In the reconsideration of Marriage Laws, progress is also shown in that a large majority of States—some thirty-eight—make proven defect, in either or both parties, a nullification of marriage; but none as yet require for obtaining a marriage license a certificate exhibiting a clean bill of health for three generations back; notwithstanding the large number of cases recorded showing the reappearance of unsuspected defect, usually intensified, in the third or fourth generation.

It has been urged that stringency of marriage laws would encourage vice; but why not make illicit cohabitation with a defective a penal offense, as does the "Mental Deficiency Act," recently brought into operation in England?

It is to be hoped that the day is not far distant that shall bring a consensus throughout the union, regarding the prevention of procreation by the unfit, as absolutely necessary to stem the tide that is polluting the race.

The separation, segregation and asexualization of the unfit in one generation, must in the nature of things bring a two-fold blessing, not only reducing numbers in one, but raising and accentuating the standards of successive generations.

With such division of classes presenting a permanent object-lesson of fit and unfit, the question with each individual being simply—"to which shall my descendants belong?"—eugenic marriage will, as the outgrowth of such civilization, become a natural custom with all, as it is now with a few, needing no law to enforce it.

The experience of the ages shows that the progress of a nation is coequal with its maintenance of race-ideals; and that the survival of the fittest can never be attained if no restriction is placed upon the propagation of the unfit.

In this study of feeble-mindedness, the vital importance of its early recognition is a point arrived at by science on many lines—physiologic, psychologic and pedagogic—a dictum which workers in social welfare also endorse, as being clearly proven in their varied experiences.

That the entire lay world should be brought to regard the feeble-minded as a social menace, and the segregation and asexualization of such imperative, has long been affirmed by leaders in the work; and was clearly acknowledged by the women of our land when, the subject being broached before a conference of mothers, I was urged by them not only to preach this doctrine, but to preach it in terms that he who ran might read.

With public thought so crystallized, the demand for increased facilities for the care of irresponsibles must meet with better success than in the past, being accepted by legislation, not as contributions to charities, but a protection to the safety of the general public—an ounce of prevention being recognized as truly worth a pound of cure.

The effect of such conditions and environment upon a rising generation would tend to create a far higher education than the much-vaunted teaching of sexology in schools. Under present conditions a subject forbidden general discussion is often greedily swallowed as poison food by semi-defectives, to the detriment of themselves and others. Whereas the evils of heredity guarded by legislation and as openly discussed as are the evils of war upon a nation, will bring to our youth a normal consciousness that the rite of marriage is not a mere legalizing of the cohabitation of the sexes—the sentiment of too many of the present day—but an entrance sacred to the vocation of parenthood to which all are not called: a vocation for which the fitting of oneself by the cultivation of the being—mental, moral and physical—toward the gaining of a noble self-hood, constitutes the truest religion as well as following the dictates of the highest patriotism. Such preservation of things sacred would lead, surely, to a day of chivalry greater than that of past ages.

When the World shall be brought to recognize that the production of maimed life is a greater crime than It at present regards its destruction; when the arm of law shall be extended to control sexualism as it now does brutalism; then, growing generations viewing in family and community life the result of true self-control in the noble self-hood attained by their elders, will press onward, inspired by high race-ideals, in this work of race preservation.

THE PRESENT STANDARD OF THE CARE AND TREATMENT IN STATE HOSPITALS.

Read before the Sixteenth New York State Conference of Charities and Corrections, Albany, N. Y., November 17, 1915.

By WILLIAM MABON, M. D.,

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There was a time when the public looked upon the institutions for the insane very much as we now look upon the prisons. The fact that then we spoke of a lunatic asylum and at present speak of a *hospital* for the treatment of mental diseases is not merely a change in name but indicates a profound revolution in the internal development of such institutions.

From merely detention places, in which the essential point of view was the safeguarding of the public against dangerous lunatics, the institutions developed first to custodial institutions in which the welfare of the patient was pushed into the foreground, but the treatment was yet essentially general without adequate reference to the needs of the specific case.

The next step of development was in the direction of the real hospital, in which each case is studied on its own merits, and the treatment as much as possible adapted to the special needs of the case. With this went hand in hand an appreciation of the social function of the hospital, and whereas formerly the institutions had little relation to the community, such a relation is being brought about more and more, and the physicians in the hospitals are developing a sense of obligation toward the patients, not only while they are under their immediate care, but also towards the patients after they have again become members of the community, and the hospitals are assuming their share in guiding the mental health of the public. With the last phase we have already overstepped the bounds of what is actually accomplished, and have entered upon that phase of development in which we are still engaged, yet which will undoubtedly be accomplished.

Although mental disorders are diseases in which many of the principles are the same as in other diseases, we are dealing in them with more complicated symptoms and *more subtle causes.* More time is required, therefore, to study the individual patient than is often the case in other diseases. Another point is important in this connection. It used to be thought that it was possible to treat mental disorders in a wholesale fashion, but just as little as this is possible with any other disease, so is it here. To be sure, it was under this conception that the transformation of the asylum into the hospital began, and that much of the present spirit of more humane management of the patients was created, but the development went, and has still further to go, in the direction of the individual treatment with special indications based upon the facts of each case.

The very nature of some of the diseases with which the hospitals deal is responsible for the fact that many patients, when they come to the hospitals, are chronic, and a re-establishment to health is impossible, but even these offer many medical problems. Take for example the cases of paresis. One out of every four men admitted to the Manhattan State Hospital is suffering from this disease. Although the treatment of paresis is at present carefully studied with a view to a possible radical cure, these studies have not gone far enough to allow us to assume that such attempts will be successful; therefore up to the present time the disease has to be looked upon as incurable and as leading to death in a few years. It is obvious that these cases of paresis are physically as sick as any other cases with severe bodily diseases; therefore they need constant, careful medical attention and the most skillful nursing, and it is just as absurd to think that they can be treated in a wholesale fashion as it is absurd to think that patients with, let us say, cancer, can thus be dealt with. Mere custodial care is out of the question here; and even if the physician is playing a losing game in his grappling with the disease, the present-day spirit of humanity, an important asset of our civilization, will not be abandoned on that account, but everything that is necessary from a medical point of view must be done, and is done. This is only one disease. Other chronic patients, for example, those suffering from senile dementia, present the same medical and nursing problems, and even the patients in whom the physical sickness is not marked, but who present essentially a chronic mental change, a change in their attitude to life expressed in false ideas and hallucinations, are yet, each of them, cases who have to be guided by physicians who understand the disorders and who are able to conserve the mentality which is left.

But there are many cases in whom the prospect for recovery, or for great improvement, exists, and in them, above all, careful study is required, and it is here that the proper management is directly dependent on a careful investigation of the patient's sickness. In some, indeed, it is a question of life and death; in others, a question of quicker or slower re-establishment to health; in still others, a question of either getting back to their homes and to their work, or of having to be permanently kept in a hospital.

These are the obligations which a modern hospital must fulfill. In order to do this a well trained medical staff is required; a good system of administration, and an adequate equipment are necessary. Especially in regard to the last point, it is well to mention here that the overcrowding in our State hospitals is a serious menace to the proper care of patients. In the Manhattan State Hospital there are at present, in round numbers, 5,000 patients. But the hospital has provision only for 3,600. There are, therefore, 1,400 patients in the hospital for whom adequate provision in space has never been made. For example, in a ward especially devoted to patients who have to be kept in bed, there are 148 patients, whereas there should be only eighty; in another ward in which chronic patients are housed, patients who need considerable attention however, it was necessary to place 128 beds instead of seventy-five, which is the certified capacity, and this ward moreover has to be used by the patients both day and night. It is not necessary to bring more examples. It is obvious that these are not only not ideal conditions, but conditions which should not exist in this State. In spite of these difficulties it has been possible as a result of the well-planned organization of State care of the insane, guided by the State Hospital Commission, to develop standards of care of which this State may well be proud.

To fulfill the task allotted to me I desire to describe here briefly the internal working of one of our State hospitals for mental diseases.

It is well, however, first to call attention to the improved method of caring for the patients prior to admission, as this is undoubtedly of great importance for the general treatment of the patients. The fact that the local health officers take charge of those who need care, or, as is the case in New York City and Brooklyn, that they are sent to special reception hospitals pending commitment, is a very important one. When the commitment is effected, the hospital is required by law to send a trained nurse or trained nurses to bring the patient to the hospital, and in many instances, even, a physician may take charge of this transfer. When this is compared with the old method of having the police or sheriff manage this stage of the situation, it is obvious what a great advance from the medical point of view has been made. It means that what formerly was a police problem, has now, as it should, become a purely medical problem.

When the patient enters the hospital, he finds himself in a ward specially adapted for the reception of patients, a ward which is planned along similar lines as are wards in general hospitals. This not only gives the best possible chance for a thorough examination of the patient, but serves to impress on the latter the idea that he is regarded as a sick person in need of medical treatment.

A preliminary examination is then made in order to determine the immediate needs of the patient. It is this which guides the physicians in their first steps of the treatment. But this having been done, a more exhaustive study of the case is made. This consists of a careful physical and mental examination, with a view to determine the nature, cause, and the development of the mental disease. In order to accomplish this, it is necessary not only to investigate the symptoms as they present themselves, but it is often necessary to obtain from every available source, information as to how the symptoms arose, under what circumstances they came into existence, what kind of a person the patient was before he broke down, what the hereditary influences were; or laboratory methods may be required to settle the question of the causation. This always means considerable work in each individual case, and when we remember that in the Manhattan State Hospital, 1,800 new patients are admitted each year, it is clear how large a problem this presents. It may here be added that all the results of this examination and study of the patient are put down in typewritten form, and there are thus collected records which are not only of value for further elucidation of scientific problems, but, above all, of great value as guides for directing an intelligent treatment of the patient. Each new patient, as soon as the mental and physical examinations have been completed, is brought before the hospital staff for consultation, so that diagnosis and treatment are based, not only on thorough study, but on discussion and consultation with others.

The indications for treatment may refer to the building up of the general health; to correcting or alleviating certain physical troubles; or the treatment required may be more in the direction of mental treatment, such as the creating of the right kind of influences to which the patient should be subjected, or the guidance of the patient out of his mental conflicts and toward a re-establishment of the right attitude toward life; but such a guidance must be based on a searching study of the patient's mental operations. Again, the indications for treatment may point essentially toward the arousing of interest in healthy pursuits and occupations. Not infrequently all these indications may be combined in a given case. Special treatment may be needed in the form of various kinds of hydrotherapy or electrotherapy. Some physical defects may require the help of specialists, and consulting physicians who have occupied themselves with particular forms of disease can be called upon. An operating room is available if surgical interferences are needed. Moreover, if the patients are very disturbed, as is sometimes the case, special efforts are made to meet these symptoms. It may then be necessary to place the patient under observation by a special nurse, or in an open air camp, or he may be treated by the continued bath—all of which is adjusted or changed as the exigencies of the case require. Special wards are arranged for those who require, above all, physical nursing because they are suffering from severe bodily diseases. There are also wards for patients with mild symptoms, in which a great deal of liberty is allowed, and in which the environment is made more homelike. Other wards are reserved for chronic patients. One of the important measures in treatment, which should yet be mentioned and which is needed in acute and chronic cases, though with modifications according to the needs, is suitable occupation. Aside from certain occupations in the way of housework, which have for a long time been furnished by every hospital, classes are conducted in arts and crafts under the direction of special instructors, and these instructors also train the nurses so that the benefit of such occupations can be carried into the wards. Classes have also been instituted for the training of more deteriorated patients so that they may be brought back if possible to more normal habits. Classes in gymnastics, calisthenics and folk dancing, are also important factors in the treatment of patients.

It is obvious that the facilities for these various forms of treatment, as well as enough physicians to do the work and enough nurses, must be available. But in order to accomplish the tasks which the modern hospital for mental diseases has thus to fulfill, it is not enough to have enough physicians and enough nurses, but, above all, to have *good* physicians and *good* nurses. Since physicians and nurses can be trained for this work only in hospitals for mental diseases, and since the State takes care of practically all the patients with mental diseases, it is a most important duty of the State to *train* the physicians and the nurses. This training of physicians and nurses benefits the patients directly, as well as indirectly. It benefits the patients directly because mental diseases follow principles which can not be understood by the ordinary physician without special training, and the study and the treatment of mental ailments can not be conducted by men not familiar with these principles, so that only those who have had adequate training are fit to do this work. The same may be said in regard to nursing. Nursing of mental cases makes demands which are different from those made on the general nurse, and, like every other special problem, requires specific training. If, therefore, the patients are to get the right kind of treatment by the State, the State has to train physicians and nurses.

But this training also benefits the patients indirectly. The more actual knowledge young physicians can acquire in our State hospitals, knowledge which represents a rounding out of their medical studies, and which broadens their view of disease, the more will the better type of physicians occupy themselves with the study and treatment of mental diseases. A hospital in which there is not a good medical spirit and no active work going on, is not the kind of place which attracts the best type of physician; and considering the difficult subject, the State needs the best physicians. The advances which have been made in the study of mental diseases, and the interest which medical educators begin to show in this field, are factors which are helping the State materially in still further advancing the care of those suffering from mental disorders; but this will only be the case if the State fully appreciates that the medical work of our State hospitals must be kept to a high standard of efficiency. It was with this aim in view that the State Hospital Commission created the Psychiatric Institute in this State, and it is interesting to know that this plan of creating a Psychiatric Institute has been followed by a number of other States in the Union. This institute is a place where physicians are trained in the understanding of the underlying principles of mental diseases. It established and keeps up the standards of medical work, and co-ordinates the work of the different hospitals. Another function of this institute, and also an important one, is that of research in mental disorders. The work of this institute has proved to be of the greatest value in stimulating the interest of physicians in both the practical and scientific problems of mental diseases. The physicians of the various State hospitals are encouraged to visit the institute in order to discuss their problems with the director, so that it is evident that the influence of the Psychiatric Institute has been that of elevating the standards of medical care and treatment.

What we have said in regard to the physicians and their need for training can also be applied to the nurses. Aside from the fact that patients are better cared for by nurses who are trained for that type of work, it must also not be forgotten that the hospitals can expect to get a good type of men and women to take care of the sick only if it can offer something to them, that is, if it can be of value to them in their private nursing. It is for these reasons that in every hospital for mental diseases in this State there has been created a training school with a special superintendent of nurses.

We have followed the patient through his admission and his stay in the hospital. When the patient has improved to such an extent that it seems wise to give him a trial outside, it is the usual custom not to discharge the patient outright, but to grant him a parole. This means that the patient is still carried on the hospital records, and that he is asked to report at stated intervals so that the physician may keep in touch with his condition, and advise and prescribe as necessity arises. This system was developed on account of the special needs which the diseases with which we are dealing present. The one great problem with patients' friends is their desire to have the patient discharged as soon as he shows a slight improvement; they overlook the obvious fact that the return to the environment in which the breakdown occurred, and before convalescence is fully established, would be about the worst possible thing for the individual. For patients with no friends able to assist them, there was developed through the co-operation of the State Charities Aid Association, a system of after-care to see them through the critical weeks of their parole. This after-care committee was formed early in 1906, being the first organization of its kind in the United States. More recently the after-care work has been taken over by the hospital as a part of its social service. About a hundred cases a year are referred to its agent by the

Manhattan State Hospital. Employment is secured for about thirty each year. Supervision is continued until the patient is doing well and has become self-supporting. Where home conditions are unknown and are thought to be of a rather low standard, the agent makes a visit and reports her observations to the physician, who further advises her. Many cases referred to the after-care agent are turned over to existing relief organizations, and receive help in this way.

I do not wish to leave the subject of the standards of care in the State hospitals without speaking of the claims sometimes made that abuses of patients exist in these hospitals. What are the real facts? We must not forget that the people whom we employ to help us to take care of the patients are human, and as such, of course, may make mistakes. All we have said before in regard to the improvement in the nursing counteracts directly the occurrence of such mistakes, but it does not entirely exclude them. Therefore, a strict surveillance is necessary. It is obvious that patients may become injured on account of their own great excitement, at times, and then it is not always possible to keep them entirely free from such injuries. But the possibility is ever kept in mind that an attendant may have been unwise, negligent or directly rough and undisciplined. Therefore, any injury is at once reported to the physician in charge, and to the superintendent, and an investigation follows immediately. In this investigation not only attendants but intelligent patients on the ward are interviewed, and according to its results the attendant is dealt with. The facts of this inquiry, when important, are also reported to the State Hospital Commission, and to the board of managers; and if there is evidence that cruelty or abuse has taken place the matter is also referred to the legal authorities. That the hospitals welcome extensive inspection, and are open to the public, I think may be gathered from the fact that over 100,000 visits are made yearly to the Manhattan State Hospital by friends of the patients. It is a distinct policy of the hospital to encourage such visits, and it is directly in line with the medical aims of the hospital to do so. We want friends to visits the patients (1) because we need information concerning the development of the mental disease; (2) because it is important for the treatment of the patient that a healthy, sensible co-operation be established between physician and family; and (3) because after the patient leaves it is necessary to modify as much as possible, according to the needs of the case, the home environment, and to pave the way for the social service and after-care.

In the further development of the hospitals, and in the maintaining of the present standards, these institutions need the support of the public. The public must feel, moreover, that the problems we are dealing with are not only medical problems, but social and economic ones, and the closer the association between hospital and public, the greater will be the success of the former.

It has been seen that the financial support which has been allowed to these hospitals has not been adequate for the housing of the patients, nor has it indeed been adequate for the growing demands of the broadening duties of the hospitals. Increased appropriations will, therefore, be needed to look after the increasing number of patients, and to remedy the neglect of former years. Nevertheless, this increasing outlay of money will be a saving in the end to the community as a whole. Early admissions will not only cut down the loss to the community of working capacity, but will make the hospital stay shorter; and the same may be expected from the greater efficiency of the hospital, and from the ever-growing activities in after-care and prevention.

Editorial

> Now, as it was plain to my father, that all souls were by nature equal,—and that the great difference between the most acute and the most obtuse understanding—was from no original sharpness or bluntness of one thinking substance above or below another,—but arose merely from the lucky or unlucky organization of the body, in that part where the soul principally took up her residence,—he had made it the subject of his enquiry to find out the identical place.
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> Now, from the best accounts he had been able to get of this matter, he was satisfied it could not be where *Des Cartes* had fixed it, upon the top of the *pineal* gland of the brain; which, as he philosophized, formed

a cushion for her about the size of a marrow pea; tho', to speak the truth, as so many nerves did terminate all in that one place,—'twas no bad conjecture;—and my father had certainly fallen with that great philosopher plumb into the centre of the mistake, had it not been for my uncle *Toby,* who rescued him out of it, by a story he told him of a *Wallòon* officer at the battle of *Landen,* who had one part of his brain shot away by a musket-ball,—and another part of it taken out after by a *French* surgeon; and after all, recovered, and did his duty very well without it.

If death, said my father, reasoning with himself, is nothing but the separation of the soul from the body; and if it is true that people can walk about and do their business without brains—then certes the soul does not inhabit there. Q. E. D.

As for that certain, very thin, subtle and very fragrant juice which *Coglionissimo Borri,* the great *Milanese* physician affirms, in a letter to *Bartholine,* to have discovered in the cellulae of the occipital parts of the cerebellum, and which he likewise affirms to be the principal seat of the reasonable soul (for you must know, in these latter and more enlightened ages, there are two souls in every man living,—the one, according to the great *Metheglingius,* being called the *Animus,* the other, the *Anima;*)—as for the opinion, I say, of *Borri,* —my father could never subscribe to it by any means; the very idea of so noble, so refined, so immaterial, and so exalted a being as the *Anima,* or even the *Animus,* taking up her residence, and sitting dabbling, like a tadpole all day long, both summer and winter, in a puddle,—or in a liquid of any kind, how thick or how thin soever, he would say, shocked his imagination; he would scarce give the doctrine a hearing.

What, therefore, seemed the least liable to objections of any, was that the chief sensorium, or head-quarters of the soul, and to which place all intelligences were referred, and from whence all her mandates were issued,—was in, or near, the cerebellum,—or rather somewhere about the *medulla oblongata,* wherein it was generally agreed by *Dutch* anatomists, that all the minute nerves from all the organs of the seven senses concentered, like streets and winding alleys, into a square.

Laurence Sterne.

The Life & Opinions of Tristram Shandy, Gentleman.

The Teaching of Physiology.

In the introductory address given at the opening of the first session of the Albany Medical College, November 12th, 1839, Dr. Thomas Hun urged the necessity upon the students of approaching their work with a scientific spirit. He drew the distinction between the art and the science of medicine, contrasted the empiric with the scientific practitioner, and emphasized the cultivated habit of the latter in deriving knowledge from the careful analysis of phenomena. "Nor is it in medicine alone the distinction is made between theoretical and practical men. In legislation, too, we hear men every day extolling themselves as practical men and sneering at theorists, as though the theorist did not found his theory on experience as well as the practical man. It would really seem to be the idea of these people that the more one thinks upon and studies out a subject, the less fit he is to be trusted with its arrangement." Dr. Hun was Professor of the "Institutes of Medicine," a term not now in use. It signified the "principles" upon which modern medicine was founded, and of which physiology was the basis, and it was conceded that the collateral sciences of chemistry and physics "were contributing daily to throw more light upon physiology." He pointed out the fundamental relations of physiology in the following terms, which constitute as it were a definition of physiology: "Modern science studies the phenomena of disease as presented in disorders of function, * * * seeks for the relations of these phenomena, and compares them with what occurs in a state of health."

Dr. Hun continued to lecture upon physiology until 1856, when he was succeeded by Dr. Howard Townsend as Professor of Physiology, which was the first recognition of this title of the chair. Dr. James E. Pomfret was professor of physiology from 1867 to 1869, Dr. John V. Lansing from 1869 to 1874, Dr. George T. Stevens for the course of 1875, and he was followed by Professor Harrison E. Webster of Union College, who lectured until 1880, when the work was taken up by Dr. Franklin Townsend.

During this early period the difficulties of practical demonstration in the teaching of this subject were unsurmountable. The necessary apparatus was not available in this country, and was only used in research work in a few centres in Europe. Dr. Franklin Townsend, who was greatly admired by the students of his day for assisting them to practical work outside the regular duties of his professorship, broke down the traditions by demonstrating at the close of each year, phenomena of the circulation in the calf, as a summary of part of the work of his course. When he retired, a short time before his death, Dr. Hermann Bendell lectured upon physiology for a year, and the chair was then occupied by Dr. Hermon C. Gordinier, who relinquished it with an appeal for the establishment of a physiological laboratory, where the entire work of the course should be carried on by the students with proper apparatus and under the instruction of a full-timed physiologist.

This plan has been elaborated, and the instruction in this most important subject is now given by Charles M. Gruber, Ph. D., who devotes his entire time to this department of the College, and the research work incidental to it.

The course in physiology for the first year students in the Albany Medical College this year occupies the full forenoons six days in the week during the spring term.

Three of the four hours each morning are devoted to the experimental work, recitations and demonstrations. The laboratory has been supplied with sufficient apparatus for fifteen tables. This makes possible the dividing of the class into groups of two or three men. The smaller the groups of men working together the more each man is thrown upon his own resources to see and do for himself. Thus the student is enabled to learn not only the functions of the tissues and organs but to learn the methods of physiological technique as well. The remaining time is devoted to lectures and examinations.

From the clearest and most typical records obtained by the students in the laboratory lantern slides are made and presented for discussion during a period of one hour devoted each week to the clearing up of any difficulties which have presented themselves. A number of the most difficult experiments or experiments which require more complicated and expensive apparatus for their performance are given to the students in the form of demonstrations prepared by the teacher. There are about thirty of these.

Another one hour period each week is devoted to recitations upon the seventy or more lectures given by the teacher during the term and upon collateral reading which the students are required to do in standard texts.

Each student is required to make a review of some physiological subject approved by the teacher and to prepare a written résumé to be presented before the class. Or if he prefers he may assist in the working out of an original research. If the research is undertaken the student must determine from the literature what has already been done upon the work at hand. In the looking up of these subjects it is expected that each man acquaint himself with the original sources of medical literature. Such a knowledge will be invaluable to him in years to come. It will enable him to turn to the many papers—not only upon physiological but upon any medical subjects,—which have already been published and which are delivered from year to year at the various meetings of medical associations. Tuesday morning is allowed for reading on these subjects in the State Education Building or for further work in the laboratory.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, DECEMBER, 1915.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	22
Typhoid fever	0
Scarlet fever	0
Measles	1
Whooping cough	1
Diphtheria and croup	6
Grippe	5
Diarrheal diseases	7
Apoplexy	13
Pneumonia	14
Broncho-pneumonia	5
Bright's disease	9
Cancer	7

Accidents and violence	9
Deaths under one year	23
Deaths over seventy years	35
Total deaths	186
Death rate	19.90
Death rate less non-residents	17.98

Deaths in Institutions.	Resident.	Non-Resident.
Albany Hospital	6	15
County House	2	2
Dominican Convent	0	1
Home for Aged Men	1	1
Home for the Friendless	0	1
Homeopathic Hospital	2	11
Hospital for Incurables	1	1
Penitentiary	0	1
Public places	1	4
St. Margaret's House	1	2
St. Peter's Hospital	4	2
Maternity Hospital	0	5
Albany Hospital Camp	2	1

Births	146
Still births	8

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	1
Scarlet fever	8
Diphtheria and croup	13
Chickenpox	17
Measles	82
Whooping-cough	17
Tuberculosis	24
Mumps	15
Septic sore throat	4
Total	181

Number of days quarantine for diphtheria:
Longest...... 20 Shortest...... 6 Average...... 12 7/11
Number of days quarantine for scarlet fever:
Longest...... 36 Shortest...... 30 Average...... 32 4/8

Fumigations:			
Houses	84	Rooms	866
Milk bottles disinfected			271
Cases of diphtheria reported			13
Cases of diphtheria, antitoxin used			13
Deaths after use of antitoxin			6

Communicable Disease in Relation to Schools.	D.	S. F.	M.
Public School No. 2	1	1	....
Public School No. 12	....	....	1
Public School No. 14	....	....	16
Public School No. 17	....	4	1
Public School No. 18	....	....	38
Public School No. 22	....	1	....
Miss Quinn's School	....	....	1
High School	....	....	12
Albany Female Academy	....	....	2
St. Agnes' School	....	....	1
Albany Law School	....	....	1
Holy Cross School	....	....	1
Christian Brothers' Academy	....	1	....
St. Joseph's Academy	1	....	....
St. Ann's School	....	....	11

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Living cases on record December 1, 1915		462
Cases reported:		
By card	18	
Dead cases by certificate	4	
		22
Total		484
Dead cases previously reported	18	
Dead cases not previously reported	4	
Removed	3	
		25
Living cases on record January 1, 1916		459

Total tuberculosis death certificates filed during December		22
Non-resident deaths:		
Albany Hospital	2	
Albany Hospital Camp	1	
		3
Resident deaths		19

Report of Visiting Tuberculosis Nurse.

Old cases	5
New cases	19
Returned from hospitals	1
Total	25
Disposition of cases:	
Died	7
Sent to hospitals	2
To general tuberculosis nurse	16
Total	25
Visits made	23
Visits made, old cases	280
Calls at Board of Health office	26

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	214
Old houses	66
New houses	148
Iron drains	82
Connection street sewers	17
Tile drains	18
Urinals	8
Cesspools	76
Wash basins	91
Sinks	103
Bath tubs	90
Washtrays	86
Tank closets	129
Slop hoppers	4
Permits issued	69
Plumbing	60
Building	9
Plans submitted	35
Old buildings	5
New buildings	30
Houses tested	63
Blue or red	5
Peppermint	5
Water tests	53
Houses examined	34
Re-examined	48
Valid	18
Without cause	16

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	11
Initial negative	257
Release positive	3
Release negative	48
Suspicious	1
Total	320

Test of Sputum for Tuberculosis.

Positive	8
Negative	37
Total	45

Widal Tests.

Positive	2
Negative	21
Suspicious	2
Total	25
Wasserman tests	1
Milk analyses	38

BUREAU OF MARKETS AND MILK.

Public market inspections	17
Market inspections	99
Fish market inspections	6
Fish peddler inspections	1
Rendering plant inspections	2
Packing house inspections	2
Milk house inspections	4
Milk depots inspected	8
Dairies inspected	4
Stores inspected	146
Lactometer readings	44
Temperature readings	44
Fat tests	56
Sediment tests	68
Bacterial counts	55
Cows examined	92
Cows quarantined	1
Commission houses inspected	8
Complaints investigated	2

MISCELLANEOUS.

Work certificates issued to children	19
Vaccinations	7
Cases assigned to health physicians	68
Calls made	129
Number of complaints of nuisances	44
Privy vaults	2
Closets	6
Plumbing	15
Other miscellaneous complaints	21
Number of dead animals removed	259
Garbage collected from 1st district, bbls	186
Garbage collected from 2nd district, bbls	206

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSES—STATISTICS FOR DECEMBER, 1915.—Number of new cases, 151; classified as follows: Dispensary patients receiving home care, 8; district cases reported by health physicians, 1; charity cases reported by other physicians, 49; moderate income patients, 70; metropolitan patients, 23; old cases still under treatment, 538; total number of cases under nursing care during month, 689. Classification of diseases for the new cases: medical, 30; surgical, 4; gynecological, 0; obstetrical under professional care—mothers, 36; infants, 39; eye and ear, 8; skin, 2; throat and nose, 0; dental, 0; infectious diseases in the medical list, 32; infectious diseases in the surgical list, 0. Disposition: Removed to hospitals, 11; deaths, 24; discharged cured, 74; discharged improved, 37; discharged unimproved, 3; number of patients still remaining under care, 540.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; number of students in attendance, 3; number of nurses in attendance, 2; number of patients carried over from last month, 3; number of new patients during month, 3; number of patients discharged, 5; number of visits by head obstetrician, 0; number of visits by the attending obstetrician, 36; number of visits by students, 23; number of visits by nurses, 44; total number of visits for this department, 103.

Visits of Nurses (all departments).—Number of visits with nursing treatment, 1,431; for professional supervision of convalescents, 750; total number of visits, 2,181; pay visits, 693; charity visits, 738; unrecorded visits, 750; cases reported to the Guild by 1 health physician, and 44 other physicians, graduate nurses 7, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 85; number of new patients, 145; number of old patients, 403; total number of patients treated during month, 548. Classification of clinics held: surgical, 13; nose and throat, 8; eye and ear, 13; skin and genito-urinary, 8; medical, 12; lung, 6; dental, 0; nervous, 2; stomach, 4; children, 11; gynecological, 8.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The regular meeting of the Medical Society of the County of Albany was held at the Elks Club, Thursday, January 13, 1916, at 8.45 p. m.

Dr. Henry L. Elsner, Syracuse, N. Y., read a paper on "Some Facts Relating to Hyperthyroidea and Its Control."

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held in the rooms of the new County Building, Thursday, January 11, 1916, at 8. 30 p. m.

Dr. Wilson G. Smillie, Instructor in Preventive Medicine, Harvard Medical School, read a paper on "Septic Sore Throat."

ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE.—The Executive Committee of the Alumni Association met at the Albany Club, January 7, 1916. The affairs of the Association were discussed and preliminary plans made for the next annual meeting.

COLLEGE NOTES.—All college exercises were suspended from Thursday, December 23, 1915, to January 3, 1916, for the Christmas recess.

Dr. Wilson G. Smillie of the Department of Preventive Medicine, Harvard Medical School, Boston, Mass., conducted the public health course given to the second year class during the month of January. He received the cordial co-operation of the State and City Departments of Health and others interested in Public Health work. The entire time was devoted to public health lectures, laboratory and field work.

The mid-year examinations for the third and fourth year students began on January 24th and for the first and second year students on January 27th. The second half of the school year will begin on February 1st.

During the Christmas recess, Dr. Charles M. Gruber presented before the American Physiological Society at their meeting in Boston, a paper entitled "The Response of the Vaso-Motor Mechanism to Different Rates of Stimulation." This paper is important in conclusively proving that the rate of stimulation as well as the intensity is an important element in the response of the vaso-motor mechanism; for example, it is well-known that when the central end of a peripheral nerve such as the sciatic is stimulated it is accompanied by a sharp rise in blood pressure. Dr. Gruber has proved that stimulation of the same intensity which would produce a rise in blood pressure may cause a distinct fall in the blood pressure if the rate of stimulation is altered.

The Critic and Guide.—*Physicians Drug News and Office Practitioner* has been acquired by the Critic and Guide Company and will be consolidated with *The Critic and Guide* beginning with January, 1916. The consolidated journal will remain under the editorship of Dr. William J. Robinson.

Association of Military Surgeons of the United States.—The Secretary of the Association of Military Surgeons of the United States and Editor of the Military Surgeon announces that the headquarters of the Association and of the Military Surgeon have been transferred from Chicago to Washington, D. C., and requests that hereafter all communications, periodicals for exchange, books for review, etc., be addressed to the newly-elected Secretary-Editor, Lt.-Col. Edward L. Munson, M. C., U. S. Army.

New York Health Almanac.—The January monthly bulletin of the New York State Department of Health has been issued in the form of a very attractive almanac. On one page a paragraph is devoted to the physical characteristics of the month and also deals with definite subjects like Fresh Air; Hygiene of the Diet; Pure Water Supply; Checking the Spread of Disease Germs; Getting Ahead of the Enemy; Keeping the Baby Well; Fighting the Fly; A Sanitary Milk Supply; Sound Minds in Sound Bodies; Immunity Against Disease; Alcohol a Race Poison; The Temple of Health.

The opposite page is of the orthodox almanac type including reference to certain health subjects.

The American Medical Association Elections Declared Illegal.—The Illinois Supreme Court affirmed the decision of the Appellate Court, handed down some time ago in the suit brought by Dr. G. Frank Lydston, that the election of the American Medical Association held outside the state of Illinois is illegal. The court has therefore ordered the issuance of a writ of mandamus directing the State Attorney of Cook County to bring quo warranto proceedings against the Association for the removal of the present officers.

Appropriation for Tuberculosis Hospital.—The Saratoga County Board of Supervisors has appropriated $17,000 for the county tuberculosis sanatorium. This is a reduction of more than $1,500 in the amount asked for by the institution, but is $5,000 more than the appropriation made last year.

Guarding Against Typhus.—Surgeon-General Rupert Blue, U. S. P. H. S., is taking great precautions against the introduction of typhus fever through the Mexican border. Senior Surgeon Claude C. Pierce has been ordered from San Francisco to Laredo, Texas, where a quarantine against typhus has been established.

Decrease in Medical Books.—The annual report of the committee on library of the New York Academy of Medicine, issued January 1st, shows a great decrease in the average of medical books published in Europe in 1915. During 1913 the Academy received 704 French and German publications, but during 1915 only 435.

Memorial to Trudeau.—Announcement has been made of a fund established by Samuel Mather of Cleveland to found a school for the graduate study of tuberculosis as a memorial to the late Dr. Edward L. Trudeau. The school will probably be located at Saranac Lake, N. Y., and courses will be offered to physicians who wish to become proficient in the diagnosis of tuberculosis. Co-operating agencies for special study will be established in New York City.

The De Roaldes Prize.—The American Laryngological Association announces that the de Roaldes prize, a gold medal valued at $100, the object of which is to encourage the advancement of the sciences of laryngology and rhinology, is now open for competition to practitioners in regular standing in the United States and Canada, not members of the American Laryngological Association. Essays must be typewritten, the customary means being taken to prevent disclosure of the author's name. They must be placed in the hands of the secretary of the Association, Dr. Harmon Smith, 44 West Forty-Ninth Street, New York, prior to April 20, 1916.

Cancer Research.—The ninth semi-annual meeting of the American Association for Cancer Research was held at the New Ebbitt Hotel, Washington, D. C., January 5th, as a symposium on cancer research in conjunction with the Pan-American Scientific Congress.

Organization of Indian Service Physicians.—A general organization of the physicians of the United States Indian Medical Service is being perfected by several physicians of that service. Because of inadequate compensation, insufficient authority in medical and sanitary matters, absence of reasonable expectation of promotion and co-ordinate organization, the physicians of this service, through its association are planning an active campaign which will put the Indian Medical Service on a higher plane. The organization will ask for a chief medical officer whose authority in matters pertaining to his office is supreme; organization to be based on that of the higher government offices; increase in salary and rank which will be determined by length of service and efficiency. Former and active officers of the service are requested to correspond with the Temporary Secretary, "Association of the U. S. Indian Medical Service," Shiprock, N. M., or the Treasurer of the Association at Crozier, N. M.

Belgian Scholarship Committee.—The Belgian Scholarship Committee has issued a circular letter of appeal for a fund to enable scholars, research workers, literary men and artists of Belgium to resume their work. It is proposed to give these worthy individuals assistance in England, Holland, France or wherever they may be, but in a few cases it is proposed to have the workers brought to this country. The committee has already received assurance from the George Washington University, Clark University and the State Universities of Missouri and Florida that they will give free tuition to Belgium students. Belgian professors have also been temporarily engaged by Princeton, George Washington, Harvard and Yale Universities and the Universities of Pennsylvania, Chicago and the Baltimore Branch of Carnegie Institute. In one of these the honorarium has been partly paid by the committee. The committee undertakes to centralize all information and to act as a clearing bureau between the educational institutions of the United States and the Belgian victims of the war. The committee appeals especially to men interested in the development and diffusion of knowledge and art and hopes that a liberal response will follow the appeal.

Typhus in Mexico.—Reports from Mexico state that following the famine, typhus has broken out and that its fatalities are particularly heavy on account of the impoverishment of the people and the filth conditions prevalent. It is reported at Pachuca that there are about seventy deaths a day and it is said that typhus is causing as many deaths as starvation in the suburbs of the city of Mexico.

Tuberculosis Patients and the Law.—The state law gives health departments power to enforce their mandates with reference to the care of tuberculous persons. Many afflicted with tuberculosis are not careful to comply with the measures necessary to prevent the spread of the disease to others. It has been necessary in some instances to enforce the regulations of health boards in this respect by application to the courts. Several such instances have occurred in Buffalo. Tuberculous patients who are refractory in this respect may even be sent to the penitentiary where special quarters are set aside for them.

Compensation for Federal Employees.—The American Association for Labor Legislation announces that the Kern-McGillicudy bill to provide just compensation for federal employees will be introduced into the new congress at an early day. This bill, which was reported favorably by the judiciary committee of the last congress and has been indorsed by the Federal Bureau of Labor Statistics, American Federation of Labor and other bodies, was drafted to supersede the law of 1908. Nearly three quarters of the half-million employees of the United States are not entitled to any compensation whatever for injuries and moreover no injured workman can sue the national government for liability. In the present year, eight states have adopted the workman's compensation bill far in advance of the existing law for federal employees while five of the thirty-three states which have workman's compensation law have adopted liberal and progressive amendments.

THE AMERICAN AMBULANCE.—Ex-Ambassador Bacon, who went to France two months ago to inspect the work of the American Ambulance, returned to New York on December 28th. He reports that the cost of running the institution was $1,000 a day, which was much less than in the beginning, and that there are now 610 patients in the hospital at Neuilly and 500 others in beds hired outside.

TOOTH PASTE TAX.—The American Druggists' Syndicate is preparing petitions to be signed as a protest against the placing by Congress of an emergency tax on tooth paste. The petition says, " We submit that, instead of taxing tooth paste and toilet preparations which contribute to human cleanliness, human comfort and human health, the tax ought properly be paid by those who are making profits out of the war."

GOVERNOR APPROVES HEALTH BUDGET.—Governor Whitman has indorsed the work of State Health Commissioner Biggs and has approved of practically all of the requests for health extension work laid out by him for the coming year. The increased expenditures are largely in the departmental laboratories and for personal service. Dr. Biggs submitted requests for appropriations amounting to $626,525 as against $380,775 expended this year. It is planned to greatly increase the laboratory service. It is announced that free pneumonia serum will soon be available. The governor has also approved a request for a physician to make physical examinations of employees of the Civil Service Department.

UNITED STATES PUBLIC HEALTH SERVICE.—The annual report of the Secretary of the Treasury as it relates to the Public Health Service contains numerous recommendations bearing on the functions of that organization and evidences the great interest of this department in the extension and expansion of the governmental agencies for the protection of the public health.

In the development of general public health work, according to the Secretary, there is great need of additional medical officers. The number of requests for advice and assistance in health problems received from states and municipalities during the past year has far exceeded that in any similar period in the history of the Service, but the limited number of officers available for the work has prevented in many instances compliance with these requests.

The field investigations, the Secretary states, have served as a stimulus to state and local health agencies, and every effort should therefore be made to encourage and turn to practical account the interest in health matters awakened in the general public. For this reason an increase in the appropriation for field work is requested.

An additional building for the Hygienic Laboratory is urgently needed. The work of this institution has been greatly extended, particularly as it relates to the examination of viruses, serums and analogous products, a vast market for which has been recently created abroad. The safeguarding of these therapeutic agents requires great accuracy and precision and overcrowding is a serious handicap. In order that the public health may be better protected, an annual appropriation of $25,000 is recommended to be expended in carrying out the provisions of the law relating to the examination of these products.

The United States is the only government of importance which does not provide for the care and isolation of lepers. The establishment of a national leprosarium where the numerous lepers, most of whom are native born Americans, may be properly segregated and treated, thereby eliminating a menace to the health of others, is urged.

The further recommendations of the Secretary relate to the need of additional clerical assistance in order to meet the demands which are increasingly made on the Public Health Bureau.

The annual report of the Surgeon-General of the United States Public Health Service records the largest amount of work performed in the history of that organization. Since the passage of the law of 1912 the public health functions of the Service have materially broadened, thereby increasing greatly its usefulness to the American people. Throughout the report the economic importance of disease prevention is made apparent to the reader.

Perhaps the most important achievement of the year was the discovery that pellagra is a deprivation disease, resulting from a faulty diet containing an excess of carbo-hydrates. While the final experiments which led to this discovery have only recently been completed, the conclusion itself is the culmination of investigations extending over a period of seven years. The work has consisted of epidemiological field studies, actual feeding experiments conducted at numerous places in Georgia and Mississippi, and experimental research at Spartanburg, South Carolina, and other places.

A new national quarantine station was opened at Galveston, Texas, and the control of the Boston station was transferred to the Public Health Service. A great reduction in immigration has been observed during the year, with a corresponding increase in the number of aliens certified. At the port of New York, the percentage has risen from 2.29, previous to the development of the European conflict, to 5.37 since that time; this increase largely being due to the fact that with the decreased immigration more time can be devoted to the examination. The number of cases treated at Marine Hospitals and relief stations exceeded 55,000, 15,000 of which were hospital patients, a considerable increase over previous years. The Coast Guard Cutter "Androscoggin" was fitted out as a hospital ship and now affords relief to deep sea fishermen on the banks of Newfoundland.

On the occurrence of plague at New Orleans, the first outbreak upon the Gulf seaboard, the State and local health authorities requested the Public Health Service to take charge of the situation. Extensive rat-proofing and other anti-plague measures were undertaken, resulting in the eradication of the disease from among human beings, and the practical extermination of the rodent infection.

Great reduction in the incidence of malaria was obtained in localities where surveys were conducted. Drainage projects, rice culture studies and the conditions surrounding the impounding of water for power purposes were investigated in order to eradicate as far as possible the disease in these areas. Scientific investigations of malarial infection showed that in the latitude of this country the most important agent in carrying the infection through the winter season is man, and not the infected, hibernating, Anopheles mosquitoes as was previously supposed. From the standpoint of prevention this is a discovery of considerable value.

Studies of occupational diseases and industrial hygiene were instituted at several places during the year. A survey of the industries of Cincinnati was made to determine the cause of the prevalence of tuberculosis among industrial workers. The investigations relating to the migration of persons suffering from tuberculosis were completed.

Upon the request of the health authorities of five states, the organization and operations of the respective boards of health were studied and recommendations advanced for improvement in the powers and duties of these bodies. The health organizations of several cities were likewise investigated.

Investigations of the pollution of streams and the examination of shellfish were also conducted.

Trachoma was combated in the Appalachian Mountains, where it is most prevalent, over 12,000 cases being treated. Surveys in certain states during the year showed that the disease is not an uncommon infection.

Rural sanitation work was conducted in six different states and everywhere resulted in the reduction of typhoid and other communicable diseases.

Public health laboratories for the prevention of the interstate spread of disease were established at Chicago, Seattle, and numerous other railway centers.

Additional duties have been imposed upon the Service by extension of relief benefits to the newly organized Coast Guard and the physical examination of seamen applying for the rating of "able seaman." For this reason, and because of the greatly increased health functions of the Service, an increase in the commissioned personnel is recommended. An additional building for the Hygienic Laboratory and the establishment of a National Leprosarium for the proper segregation and care of cases of leprosy are also recommended.

SANITATION AND POVERTY.—The factor of poverty in sanitary problems was discussed in Washington, November 26th, by Surgeon-General William C. Gorgas, whose success in cleaning up Havana and the Panama canal zone have brought him recognition as America's leading sanitarian. His audience was the Clinical Society of Surgeons, assembled in their twenty-fourth annual meeting.

WORK OF AMERICAN AMBULANCE.—During the first eleven months of its establishment the field service of the American ambulance in Paris has transported 57,000 wounded from the front. The number of automobiles now engaged in this service is about 90, with 20 more machines attached to the hospital at Neuilly. The cost per trip per wounded man runs from 10 cents to 60 cents, depending on the length of the run and the condition of the roads. One supply and one staff machine accompany each of the units in the field, themselves composed of from ten to twenty-five cars. There have been no deaths among the drivers of the field ambulance, although they penetrate very near to the lines and are frequently under heavy fire. Additional cars are added to the field equipment as the fund grows. The number of beds in the hospital at Neuilly has increased from 175 to 600. The per diem cost is $1.32 for each patient, which is not considered high, regard being had to the increased cost of all necessities and to the fact that all the patients are surgical.

PERSONALS.—Dr. MORRIS B. BEECROFT (A. M. C. '13), has resigned as first assistant at the Bender Laboratory and instructor at the Albany Medical College to accept a position as assistant to Dr. B. T. Terry in the Pathological Department of the Kings County Hospital, Brooklyn.

DIED.—Dr. WARREN P. PALMER (A. M. C. '80), Brooklyn, N. Y., died in the Prospect Heights Hospital, Brooklyn, January 7, 1916, from pneumonia, aged 58.

—Dr. SANFORD BASSLER (A. M. C. '96), died at his home in West Berne, N. Y., January 13, 1916, from Bright's disease, aged 51.

—Dr. LEONARD K. VAN DYCK (A. M. C. '15), senior medical interne in St. John's Hospital, Brooklyn, died in that institution December 30th, from pleuro-pneumonia.

In Memoriam

WARREN B. PALMER, M. D.

Dr. WARREN B. PALMER, a graduate of the Albany Medical College of the class of 1880. died at his home in Brooklyn, N. Y., on January 7, 1916, after a short illness with pneumonia.

Dr. Palmer was born at Keansburg. N. J., on December 21, 1857. a son of Dr. William W. and Weltha Palmer. His preliminary education was obtained in Trenton. N. J.. and after graduating from the Albany Medical College he began the practice of medicine in Brooklyn. He gave special attention to the diseases of the throat and ear. Dr. Palmer came of a family of physicians. among them being Dr. Judson Palmer and Dr. Howard Palmer of Brooklyn, and Dr. Charles Palmer of Homedel, N. J.

Dr. Palmer was a quiet and unostentatious practitioner who gave his time to his work and was not active in public affairs. He will be remembered by the students of his day in the college as an industrious, persistent worker, with appearance of strong physical health and endurance, so that his premature death is unexpected.

Eugene J. Gallagher, M. D.

Dr. Eugene J. Gallagher, a graduate of the Albany Medical College of the Class of 1892, died at his home in Yonkers, N. Y., on December 3, 1915, after an illness of about two weeks.

Dr. Gallagher was born in Monticello, N. Y., in 1869, and after graduating from the Albany Medical College served for two years as interne in St. Peter's Hospital. After this he removed to Kingston, where he held a position upon the staff of the City Hospital for twelve years, and served five years as police surgeon and three years as health officer. Afterward he removed to Yonkers, and has also been one of the district physicians of that city for the last six years. He was a district medical examiner for the Metropolitan Life Insurance Company, and member of the Medical Society of the State of New York and of the American Medical Association. He was also active in medical circles in Yonkers. He is survived by his wife, who was Miss Anna Kiernan of Boston, Mass., and two sisters.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., formerly Professor of Psychiatry, Columbia University. Eighth edition, revised. Octavo volumes of 940 pages, with 350 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5 net; half morocco, $6.50 net.

The eighth edition of Church and Peterson sustains the high opinion which is represented by this great demand for publication. The book is entirely practical, and probably the most valuable and convenient work of reference on the subject of nervous and mental diseases in the library of the practicing physician.

In the present edition there has been no change in the section on mental diseases, which is commendable, as a great deal of the work in this department of medicine in the last few years has been an elaboration of the nomenclature and reclassification of hypothesis without much change in basic facts.

Dr. Church has added considerable on the section on infantile paralysis, a phrase which he uses in the preface but omits from the index. The revision of this chapter brings the subject up to date, and the infectious origin of the disease is emphasized.

Another important revision is that on the subject of syphilis of the nervous system. A great deal has been done in the last few years in the intensive treatment of the tertiary manifestations of this infection, although the results are still in doubt, and it is possible that disappointment may follow the expectations that have been held out. Dr. Church still insists upon the value of a distinction between the distinctive and parasyphilitic lesions, maintaining that the early parasitic activities are not identical with the secondary toxic or chemical changes arising from them.

The conservative and practical view of the author in the entire text of this volume is to be commended, and since the publication of Gower's there has appeared no more valuable work on the diseases of the nervous system.

Differential Diagnosis. Presented through an analysis of 317 cases. By RICHARD C. CABOT, M. D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo of 709 pages, 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5.50; half morocco, $7.

This book is the companion volume to that published in 1911 and reviewed in the ANNALS, August, 1911, page 495. The plan of Dr. Cabot's book, founded upon the "case system" should prove of considerable practical value in helping to train medical students to think, to force them to adopt the active rather than the receptive mood. For the same reason it should fill a need as a method of graduate study by practitioners. By this method alone, however, it is doubtful if more than an elementary, even though practical, knowledge can be gained. The "leading symptoms" traced to their cause in volume II as a basis for differential diagnosis are abdominal and other tumors, vertigo, diarrhea, dyspepsia, hematemesis, glands, blood in the stool, swelling of the face, hemoptysis, edema of the legs, frequent micturition, polyuria, fainting, hoarseness, pallor, swelling of the arm, delirium, palpitation, arhythmia, tremor, ascites and abdominal enlargement. The great bulk of the book is made up of case histories with a discussion of these. There are also classified lists of the causes of various symptoms and signs enumerated as "leading symptoms," as indicated in an analysis of the cases from the records of the Massachusetts General Hospital.

T. O.

A Manual of the Practice of Medicine. By A. A. STEVENS, A. M., M. D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania, Lecturer on Medicine in the University of Pennsylvania. Tenth edition, revised. 12mo. of 629 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Flexible leather, $2.50 net.

The latest revision of this well known manual contains numerous changes in various sections to bring the book abreast of recent literature. The general excellent arrangement and attractive form has been retained. Although there is a tendency for teachers to frown upon medical manuals; if properly used, however, in conjunction with original articles and more extended textbooks such a manual often serves to correlate information gleaned from the clinic and special reading. T. O.

Alveolodental Pyorrhea. By CHARLES C. BASS, M. D., Professor of Experimental Medicine, and FOSTER M. JONES, M. D., Instructor in the Laboratories of Clinical Medicine at the Tulane University Medical College, New Orleans, La. Octavo volume of 167 pages, with 42 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $2.50 net.

This small book is a monograph treating the subject of pyorrhea alveolaris or as the authors term it "alveolar-dental pyorrhea" in the light of recent research. It is considered by them as proved that the affection is due to endamoeba buccalis as the specific cause. Many believe, however, that this is not proved, that the organism may be merely a secondary invader. Some tend to exaggerate the importance of the smaller or larger suppurative conditions of the mouth as a cause of systemic infection. Pyorrhea is not only important in this relation but its local affect on the teeth and indirectly in the general health of the individual. The authors are firm believers in the great therapeutic, even curative, value of emetin in this affection. T. O.

Cancer: Its Cause and Treatment. By L. DUNCAN BULKLEY, A. M., M. D., Senior Physician, the New York Skin and Cancer Hospital. 8vo., cloth, 224 pages. Price $1.50 net, postpaid. Paul B. Hoeber, Medical Publisher, 67-69 East 59th Street, New York.

The book resembles in many respects those of certain English authors. Data which may be favorable to a pre-conceived view is presented. Dr. Bulkley believes in the "constitutional nature" of cancer and thinks that benefit is obtained by a diet carefully prepared with a daily intake of about 2,100 calories and containing a minimum of protein in vegetable form. He advocates this as a rational prophylactic method for avoiding cancer also for use after operation to avoid recurrence. It would seem that he is unable to prove his contentions. T. O.

The Principles of Pathologic Histology. By FRANK B. MALLORY, M. D., Associate Professor of Pathology, Harvard Medical School and Pathologist to the Boston City Hospital. Octavo of 677 pages, with 497 figures containing 683 illustrations, 124 in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5.50 net.

This book by Dr. Mallory fills a great need in the pathology of to-day. There has been a tendency to belittle the morphological point of view as the chemical and physiological aspects have been developed. While it is realized that advance in pathological chemistry and physiology may be still in its infancy and capable of great extension it is equally important not to lose sight of the interpretation of function in a study of histological detail and of the histogenesis of microscopic lesions. This necessary correlation is now well recognized by the foremost anatomists. Dr. Mallory's book has been criticised as being incomplete. It has been said that many subjects are not considered or are merely touched upon. No pretense is made, however, by the author of discussing all the subjects usually included under the term "pathology." This book is based on Dr. Mallory's personal work on material collected at the Boston City Hospital in the Pathological Department for the past sixteen years. The illustrations are excellent photomicrographs taken by Dr. Mallory himself and the drawings made by an artist under his direction. In these days of compilation it is refreshing to have such an original book. It will be particularly valuable to medical students and research workers. T. O.

Pathological Technique. Including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. MALLORY, M. D., Associate Professor of Pathology, Harvard Medical School; and J. H. WRIGHT, M. D., Pathologist to the Massachusets General Hospital. Sixth edition, revised and enlarged. Octavo of 536 pages with 174 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $3.00.

In this sixth edition of the well known laboratory guide the general excellent form and arrangement is retained. It is with a feeling of confidence that one opens this book for it is well known that the authors add new methods and tests only after their value has been determined after the test of time. Several more recent staining methods have been added and newer methods in clinical pathology such as the fixation test for gonorrhea and] echinococcus cyst, Lange's colloidal gold test, etc. The book is not a compendium including many worthless technique methods but presents a limited number of the more useful and reliable methods. T. O.

Pyelography (Pyelo-Ureterography) a Study of the Normal and Pathologic Anatomy of the Renal Pelvis and Ureter. By William F. Braasch, M. D., Mayo Clinic, Rochester, Minn. Octavo volume of 323 pages, containing 296 pyelograms. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $5.00 net.

Pyelography is now known to be a valuable aid in the diagnosis of kidney and ureteral conditions. The first attempts to visualize the urinary tract by means of the X-ray were made as early as 1897 but it is only within the last few years that a satisfactory technic has been developed and the results have justified its use. It must be admitted, however, that the ideal injection medium has not yet been discovered and the employment of pyelography as an aid to diagnosis can not be said to be entirely free from danger to the patient,

Dr. Braasch, in connection with the Mayo Clinics, has had an opportunity to test the efficiency of pyelography in a large number of cases. In 1913 he reported a series of over 1,000 pyelograms made without serious results to any patient. He summarises the conditions in which this method of diagnosis has been of value as follows: (1) normal pelvis; (2) hydronephrosis; (3) pyelitis; (4) pyonephrosis; (5) renal tuberculosis; (6) renal tumor; (7) renal and ureteral anomaly; (8) mono cystic and poly cystic kidney; (9) identification of renal shadows; (10) localization of renal shadows; (11) identification of ureteral obstruction; and (12) as an aid to ascertain renal function.

"Pyelography" is a most interesting and instructive book and a valuable contribution to medical literature. J. M. B.

What to Eat and Why. By G. Carroll Smith, M. D., of Boston, Mass. Second edition, thoroughly revised. Octavo of 377 pages. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $2.50 net.

In this second edition new chapters on exercise and rheumatism have been added, also numerous changes have been made in the revision of the rest of the text. It would seem that various diseases had been described separately in which treatment, as regards dietetics, is almost identical. The first edition was reviewed in the Annals, 1911, Vol. 32, page 690.

The general attractive form and arrangement of the book has been retained. Frequent headings in heavy faced type are placed in the margin and are a great aid for rapid reference. The clear type on unglazed paper is not fatiguing but pleasing to the eye. As a simple work on practical dietetics, this book should be useful to students and practitioners.

T. O.

Diarrheal, Inflammatory, Obstructive and Parasitic Diseases of the Gastro-Intestinal Tract. By SAMUEL GOODWIN GANT, M. D., LL.D., Professor of Diseases of the Colon, Sigmoid Flexure, Rectum and Anus at the New York Post-Graduate Medical School and Hospital. Illustrated, 181 text figures, pages 604. Philadelphia and London: W. B. Saunders Co., 1915.

This book is along lines similar to the author's previous work on constipation and intestinal obstruction. It is a very complete yet practical treatise covering the etiology, pathology, symptoms, diagnosis and treatment of acute and chronic diarrhea and allied affections as well as diseases due to gastro-intestinal parasites. Considerable attention is devoted to the author's methods of irrigating the colon by both medical and surgical measures.

The book is very useful in supplementing the general text books. The illustrations are excellent. T. O.

A Text-book of Pathology. By ALFRED STENGEL, M. D., Professor of Medicine, University of Pennsylvania, and HERBERT FOX, M. D., Director of the Pepper Laboratory of Clinical Medicine, University of Pennsylvania. Sixth edition, reset. Octavo of 1,045 pages, with 468 text-illustrations, many in colors, and 15 colored plates. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $6.00 net, half morocco, $7.50 net.

In this sixth edition, the general form of previous editions has been retained although many new illustrations have been added. The review has been accomplished in collaboration with Dr. Herbert Fox and appears under joint authorship. A separate chapter is devoted to the pathology of the glands of internal secretion and new sections added on the pathology of the eye, ear and skin. The chapter on technique has been omitted. In describing the pathology due to the Bordet-Gangon bacillus of whooping cough it is stated that this organism, according to Wright, is situated between the cilia of bronchial epithelium and interfere with their movements, that efforts to remove it cause the prolonged coughing attacks. This observation and this hypothesis of the cause of the paroxysmal cough should be credited to the research of Mallory.

As in the past, this book will be found useful as a text-book for medical students. T. O.

Tuberculosis: Playing the Lone Game, Consumption. By THOMAS CRAWFORD GALCREATH, author of "Chasing the Cure in Colorado." Journal of the Outdoor Life Publishing Co., 289 Fourth Ave., New York City, 1915.

This book is a small paper covered volume of 74 pages. The author, who is a sufferer from tuberculosis tells, in a simple and interesting manner, of his eleven years' experience, of the failures and successes in his fight against tuberculosis. He makes many valuable suggestions by which other sufferers may benefit and he gives not only the "don'ts" but also emphasizes the "do's." The book should be very helpful to one suffering from tuberculosis; it should also be an inspiration because of the courage and hope which the author has himself shown. T. O.

A Synopsis of Medical Treatment. By GEORGE CHEEVER SHATTUCK, M. D., Assistant Physician to the Massachusetts General Hospital. Second edition, revised and enlarged. Boston: W. M. Leonard, Publisher, 1915.

This small book of 185 pages is a valuable addition to the medical student's armamentarium. In concise form the general principles of medical treatment are clearly described. The text includes the treatment of cardiac insufficiency, nephritis, acute infectious diseases, gastric and duodenal ulcer and their complications. A synopsis of the description of important drugs and a list of valuable drugs is added, including indications for their use.

This book may be heartily recommended to third and fourth year medical students as well as to practitioners. T. O.

Potter's Compend of Human Anatomy. Revised by D. GREGG METHANY, M. D., L. R. C. P. and S. (Edinburgh), L. F. P. S. (Glasgow), Associate in Anatomy, Jefferson Medical College, Philadelphia. Eighth edition with 139 illustrations, also numerous tables and 16 plates of arteries and nerves. Philadelphia: P. Blakiston's Sons & Co.

The general form of the book in this familiar quiz compend series is retained, but numerous changes in description and nomenclature have been necessitated in revision. T. O.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery and the Specialties, by leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, M. D., Philadelphia, and others. Volume I. Twenty-fifth series, 1915. J. B. Lippincott Company, Philadelphia and London. The price of this book is $2.00.

This volume contains the usual number of interesting and instructive articles for which the "Clinics" are noted and also a large section devoted to the "Progress of Medicine during the year 1914."

However, there are two essays worthy of special note, as they differ from the average run of medical communications. The writer refers to the two reports of visits to the clinics of Drs. McCrae and Murphy.

From the pen of Dr. E. J. G. Beardsley of Philadelphia we learn of the splendid work done by Prof. Thomas McCrae of the Jefferson Medical College Hospital of his thorough methods in physical examination and of his forceful, authoritative manner of teaching, also a synopsis of the cases presented at the medical clinic.

Turning from the medical to the surgical world, Dr. P. G. Skillem, Jr., of Philadelphia gives us a graphic description of the clinical work of that prince of teachers, John B. Murphy, at the Mercy Hospital of Chicago. The essay is accompanied by a most excellent portrait of Dr. Murphy.

The two articles cited above are broadening in their effect upon the reader, giving him an insight of the work being carried on daily in our American Hospitals by men who are world leaders in their special fields. They lift one out of the narrow routine of our provincialism and inspire us with higher and nobler ideals both in the science of medicine and the art of teaching. H. D. C.

PATHOLOGY AND BACTERIOLOGY

Edited by Ellis Kellert, M. D.

The Lymphocyte in Natural and Induced Resistance to Transplanted Cancer. (Studies in Lymphoid Activity.)

JAMES B. MURPHY and JOHN J. MORTON. *Journal of Experimental Medicine, August* 1, 1915, *P.* 204.

In previous experiments, Murphy showed that resistance to foreign tissue grafts depended on the activity of the lymphocyte. Chick embryos which did not resist the growth of grafted tissues could be made to do so by the introduction of tissue containing numerous lymphoid elements, such as spleen and bone marrow. Animals deprived of their lymphoid tissue by means of X-rays could not resist the growth of foreign tissues. There is a marked histological resemblance between the failing heteroplastic graft in the foreign host and the cancer graft in the immune animal. In both there is found in the tissues about the graft, numerous small round cells. These elements are absent about the growing cancer graft in a susceptible animal.

After inoculation of cancer into an immunized animal, an immediate increase in the circulating lymphocytes was noted. This has been as high as 25,000 cells. In susceptible animals the lymphocytes are decreased. In cases where the tumor growth was retarded only a slight increase in the lymphocytes appeared.

Repeated doses of X-ray destroy the major portion of the lymphoid system of the mouse without injuring the other tissues. Mice were immunized by injections of defibrinated mouse blood and exposed to the X-rays after being inoculated with cancer. The tumors grew much more rapidly than in the unexposed animals.

A series of 20 rats were selected and 10 of them exposed on 12 successive days to X-ray and then all 20 inoculated with Jensen rat sarcoma. In the ten untreated animals, only two developed tumors, while in the remaining rats all developed large tumors which caused death. In a similar experiment in which the Flexner-Jobling carcinoma of the rat and yet another series of mice in which mouse carcinoma was used, the X-rayed animals developed a much higher percentage of takes than the animals not exposed.

The results of these experiments indicate that a marked lymphocytosis appears after inoculation with cancer. The resistant state is abolished when the lymphocytosis is prevented. This accounts for the fact that splenectomized animals are more susceptible to cancer than normal ones.

E. K.

VOL. XXXVII MARCH, 1916 No. 3

ALBANY
MEDICAL ANNALS

Original Communications

THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

Read before the Medical Society of the County of Rensselaer, November 9, 1915.

BY HENRY S. GOODALL, A. B., M. D.,
Burlington, Vt.

To be a good diagnostitian in any line of medicine requires a frequent review of the symptoms and signs pertaining to that line, together with a reconsideration of such other diseases as present points of similarity.

For this reason I shall make bold to present for your further discussion certain points relating to the diagnosis of pulmonary tuberculosis—more particularly during its early stage.

Certain symptoms are so familiar as indicating tuberculosis that one is prone to overlook the fact that they may be due to other causes even when the lung shows some change from normal.

Hemorrhage from the respiratory tract is due to pulmonary tuberculosis in the vast majority of cases.

Nevertheless it may be due to various conditions of the upper respiratory tract, especially to enlarged or varicose veins on the posterior pharyngeal wall or on the lingual tonsil, to bleeding gums, etc. Allen observed a case of repeated hemorrhage, long considered tubercular, in which the blood flowed from varicose veins on the inside of the cheek near the molar teeth. The lungs were negative.

Hemophilia and severe anemia, leuchemia or purpura may cause bloody expectoration.

Heart disease, especially mitral stenosis, and aortitis or aortic aneurism, may cause hemorrhage; so also may some forms of nephritis. Aneurism of the aorta produces cough, dyspnoea, chest pain, impaired general health and hemoptysis. Mitral stenosis produces a somewhat similar train of symptoms. In both the lungs fail to show the typical signs of tuberculosis. In mitral stenosis, causing hemoptysis, we find a strongly accentuated second sound at the area of the pulmonary valve. Such accentuation is also seen in tuberculosis, but pulmonary disease sufficient to produce it is recognized with great ease.

Embolism and infarction of the lung, abscess and gangrene, all may cause blood spitting.

Simple acute bronchitis with violent cough may produce a small bleeding.

Chronic bronchitis occasionally and bronchiectasis frequently cause hemorrhage. Syphilitic ulceration of the bronchi or trachea may be accompanied by hemorrhage and cancer of the lung is generally marked by it.

In all these conditions the evidence of pulmonary infiltration is absent or, if present, is not typically located. Tubercle bacilli are absent.

Vicarious menstruation from the lungs is, I suppose, a possibility, but pulmonary hemorrhage at the menstrual period is almost always due to pulmonary tuberculosis. A considerable percentage of tubercular women have more or less hemoptysis at the menstrual period; in some cases it recurs regularly every month. Other cases present the same symptoms midway between periods, like a recurrent intermenstrual neuralgia. Either type of hemorrhage calls for careful examination of the lungs.

The causes of cough are protean. A hair resting on the eardrum has been reported as a cause of chronic cough. Various conditions of the nose and throat, chronic tracheitis, mediastinal growths, enlarged glands and a long list of cardiac and pulmonary diseases produce cough.

There is nothing peculiar about the cough of tuberculosis unless it be that it is more fully under control of the will than coughs from most other causes.

True anemia is not frequent in early tuberculosis; it is apparent rather than real. We observe a well-marked pallor, but we find the hemoglobin up to 85 or more and the red cell count normal.

A true anemia, with the red cells down to 3,500,000 or even less, is common in actinomycosis and streptothricosis of the lung, and when found should remind us of those diseases.

A relative lymphocytosis suggests a tubercular process if other causes are absent, but is not characteristic.

A rapid pulse always suggests tuberculosis, and this probability is strengthened if the pulse is unduly influenced by exercise and if the blood pressure is low.

Unstable equilibrium of the vaso-motor system should direct our attention to the lungs. It is manifested by uncalled for blushing and by flushing of one or both cheeks after meals or after trivial excitement.

All forms of indigestion are noted with pulmonary tuberculosis. Its persistency is about its only characteristic. Hyperchlorhydria has been more common than any other symptom in my observation.

Of all symptoms of pulmonary tuberculosis a slight daily rise of temperature is perhaps the most important.

To determine the presence or absence of fever the temperature should be taken and recorded every two hours during waking hours for one week, taking it upon the even hours one day and the odd hours the next. This gives us a week's record in which each hour of the day is covered. If a slight rise of temperature is found at any time, it should be regularly sought at that hour. If no rise of temperature is recorded the case is clearly afebrile at least during the day. If the patient is restless at night, or dreams a good deal, or is tired in the morning, or has night sweats, the temperature is to be taken during the night. I recall one case who had a normal temperature from 7 a. m. to 10 p. m., but who had, for a long time, a temperature of 100½ to 101 at 2 a. m.

A temperature below 100 occurring only at considerable intervals has no special importance. A daily rise to 99 1/5 or more demands explanation. So does a daily spread of more than two and a half degrees between high and low, even if the high is under 99.

Although tuberculosis is by far the most common cause of daily subfebrile or febrile temperature, still such temperature may be caused by Graves' disease, chronic conditions of the throat, decayed teeth, intestinal toxemia, genito-urinary disease, and many other chronic conditions.

Cabot says: "In all cases of unexplained fever without obvious local cause consider subacute and chronic renal infection, especially in girl babies and in women before or after parturition." Occasionally fever is unexplainable. Kerley reports a case of a child who had a temperature of 100 to 101 daily for a considerable period, yet showed no disease. He was apparently quite well and developed mentally and physically in a perfectly standard way. After continued observation the temperature was disregarded.

A daily menstrual or premenstrual rise of temperature to 99½ or more strongly suggests pulmonary disease, especially if pelvic disease is absent.

An otitis media that goes on to perforation of the drum without pain or with only slight pain is often a tuberculous process and calls for careful examination of the lungs.

There are three points in the past history of a case suspected of having pulmonary tuberculosis that are of foremost importance: a history of exposure to infection; a history of suppurating glands; and a history of pleurisy with effusion.

So-called idiopathic pleurisy with effusion is, in the majority of cases, a tubercular pleuritis. Various investigators have compiled statistics showing that 50% or more of such pleurisies are tubercular. One authority places the percentage as high as 95.

In a collection of 514 cases, 48 per cent subsequently developed pulmonary tuberculosis. Among cases developing pleurisy between the ages of 25 and 35, 60 per cent developed phthisis.

Most cases develop within five years and the majority of these during the second and third years after the pleurisy. The disease frequently develops, not on the side of the pleurisy, but at the apex of the opposite lung. Idiopathic dry pleurisy is likewise often followed by tuberculosis.

Certain conditions are essential for a successful physical examination:

First. As the physical signs of early tuberculosis are slight and not easily heard, the clothes should be entirely removed to the waist. A light shawl or cape may be thrown over the shoulders and shifted to expose the front, back, or side of the chest.

Second. The position during examination should be one that is comfortable for both the examiner and the patient, but the patient must be erect and symmetrically posed.

Third. The examination should be made in a quiet room.

Fourth. Plenty of time must be allowed. At the least half an hour is required to go over the chest with sufficient care and detail to warrant the exclusion of pulmonary tuberculosis. We may find this disease very quickly, but to be sure it is absent requires time.

Inspection gives us little information in early pulmonary tuberculosis unless we observe Litten's sign and thus estimate the motion of the diaphragm on each side.

This motion should also be determined by percussing the lower border of resonance during forced expiration and inspiration and marking the limits on the back and sides of the chest. The motion of the diaphragm may be further checked by the X-ray. Not infrequently impaired motion of the diaphragm on one side appears before other physical signs are well marked. It indicates disease of the apex on the side of limited motion, provided we can exclude other causes such as basal pleurisy, old adhesions, abdominal tumors, etc.

Webb, Forster and Gilbert have called attention to the displacement of the trachea just above the sternum. Palpation in the supra sternal notch shows it to be drawn toward the diseased apex or the apex most diseased if both are involved. At times this may help us to decide which apex is diseased.

Percussion should be made with very light strokes. The strokes must be even in force. The pleximeter must be firmly pressed upon the chest and the pressure must be even.

A very light stroke which produces a barely audible tone over healthy lung may produce no sound at all over infiltrated tissue. It is easier for most people to recognize this loss of sound than it is to recognize a change in pitch. Percussion passing from healthy to diseased lung, from resonance to dullness, gives changes more easily detected than when passing in the opposite direction. In percussing the lungs comparison must be made not only from side to side but also up and down on each side separately. Both tops, for instance, may be dulled as compared with the bases, and still retain their usual differences when compared with each other.

Kroenig's area is the area over which apical resonance is projected. It is measured transversely at the top. It should be five centimeters on each side and should not be less than four centimeters in a healthy adult. The inner and outer border of each apex is percussed out with light strokes and marked on the skin from the clavicle to the spine of the scapula and to the spine of the first dorsal vertebra. Contraction of Kroenig's area or isthmus, as it is also called, indicates fibrosis or collapse of the underlying apex.

The normal resonance over the lung extends up to the first dorsal vertebra close to the spine. If it fails to reach this level or shows a region of dullness between the first dorsal vertebra and the lateral resonance there is retraction of that apex.

By auscultation some observers first recognize changes in the transmission of whispered words; others appreciate changes in the respiratory sounds earlier. Increased transmission of whispered word sounds, elevated pitch of the inspiratory sound, relatively increased pitch or increased length of the expiratory sound as compared with the inspiratory sound, all indicate condensation of the underlying lung tissue. Normally whispered word sounds are not well heard except near the sternum and spine over the large bronchi, and when heard elsewhere they demand explanation. The normal expiratory sound is shorter and lower in pitch than the inspiratory sound. If the reverse is found some pathological condition is present. The voice sounds are usually too coarse to be of use as early in the disease as is the whisper.

The normal differences between the sounds at the right and left apices are well known. The same differences in reversed position exist at the base of the lungs posteriorly. That is the vocal and whispered sounds are louder and the breath sounds harsher and the expiratory sounds relatively longer and higher pitched at the left base posteriorly than at the right. This is not true on the front of the chest. This condition is the rule in normal children and continues more or less into adult life. Slight deviations at the left base posteriorly must be interpreted with more caution than when found elsewhere, just as at the right apex.

Changes in resonance, vocal fremitus, the whisper, and the respiratory sounds, indicate a pathological condition, but they do not distinguish between active lesions and those which are healed.

On the other hand, the presence of rales usually indicates more or less activity. The usual rale of early tuberculosis is a small moist crackling sound.

Rales that are heard during ordinary breathing or through the clothes are found only in advanced disease. The rales of true early tuberculosis are heard only with cough and close to the seat of production.

Coughing should be performed in two ways—the usual way, with the lungs partly filled with air, and also at the end of expiration. This is the so-called expiratory cough and is performed by gently exhaling until the lungs are nearly empty and then forcing a cough with the last of the air that can be expelled. Each form of cough should be followed by a quickly drawn inspiration. In beginning tuberculosis the expiratory cough first produces fine rales; later the ordinary cough will produce them, and as the disease advances they may be heard without cough.

One can never deny the absence of rales until both forms of cough have been tried all over the lungs—a necessary but tedious process.

The X-ray gives valuable information as to the condition of the lungs and intrathoracic glands.. It does not enable the ordinary observer to distinguish between active and passive lesions.

In doubtful cases the X-ray should be used. In cases that are not doubtful it will often give us a fuller conception of the condition present.

If sputum is available it should always be examined. If ordinary smears are negative the antiformin or other concentration method should be used. If acid fast bacilli are absent we should stain the residue for Much's granules. Negative findings do not have any weight against a diagnosis of tuberculosis based on signs and symptoms. Indeed, the diagnosis should be frequently made before the bacilli appear. The prognosis is much better in the closed cases.

If the sputum is persistently negative animal inoculation may be tried.

Improved methods of culture promise to make that test of practical value. Albumen is present in tubercular sputum. It is also found in edema of the lungs, pneumonia and other diseases of the pulmonary parenchyma. It is not found in acute bronchitis and not often in chronic bronchitis without dilatation.

Recently favorable reports of the complement fixation test have appeared. This test is said to be uniformly present in early cases and grows less in advanced disease. It is well marked in non-tubercular cases if a strong Wasserman is present and may show faintly in healthy persons.

The Von Pirquet tuberculin test is useful during infancy when latent and healed lesions are absent. It is of little value in adults if positive, but has some value if negative.

A positive systemic reaction to a small hypodermic dose of O. T. one-tenth cubic millimeter or even one cubic millimeter is fairly good evidence of active tuberculosis while a reaction produced only with eight or ten cubic millimeters is not of much importance. Negative results with ten cubic millimeters make active tuberculosis improbable. The evidence given by symptoms is of more weight than that of the tuberculin tests whenever they are at variance. Focal reactions are dangerous and at times fallacious.

Mild tuberculosis of the larynx occurs with sufficient frequency in cases of pulmonary tuberculosis, with slight physical changes in the lungs, to make its presence of importance in diagnosing pulmonary disease.

Thickening of the mucous membrane on the inner surface of the interarytenoid space, that is, between the posterior ends of the vocal cords, is one of the earliest and most common manifestations. This thickened mucous membrane may be thrown into folds and ridges running up and down; it may be ulcerated or may form a warty granuloma. In either case there is absence of marked inflammatory redness, and the swelling looks soft, soggy, or edematous. If a granuloma, it may have a whitish crest, and is firmer than other forms of laryngeal granuloma.

Tuberculous infiltration of the larynx is circumscribed, monolateral, nonsymmetrical, usually in the posterior half, is not very red, and has a more or less edematous appearance. Aside from the interarytenoid space it is found most often over one arytenoid or involving one of the vocal bands which then overhangs and hides the true cord more or less.

One vocal cord, or a part of it, may be swollen, thick and beefy, or dull, yellowish white, or covered more or less thickly with bright red vessels on a dull, yellowish ground. Ulceration may be present, usually on the posterior third or superficial erosions may cover the cord, giving it a mouse-eaten look. Ulceration may occur over an arytenoid or on a ventricular band. Tuberculous ulcers within the larynx are shallow, with irregular, poorly-defined edges and a dirty base. They frequently coalesce. There is little surrounding redness. Syphilitic ulcers are deeper, sharply defined, with clearly-cut, rather steep margins and well-marked inflammatory redness round about. The underlying infiltration looks firmer than that of tuberculous lesions. Syphilitic ulcers are said to be more frequent in the anterior half of the larynx as tuberculous ones are in the posterior half. Tuberculous ulcers give focal reactions to tuberculin. Syphilitic ones are accompanied by a Wasserman and other signs of leues.

Tuberculous involvement of the interior of the larynx may or may not produce hoarseness. It is painless, or nearly so, for a considerable period. On the contrary, involvement of the exterior of the larynx, that is, the posterior surface of the inter-arytenoid space, the aryepiglotec fold, and the epiglottis, as well as deep-seated disease of the arytenoid cartilage, is very painful. Laryngeal tuberculosis in these locations is, however, not common until the later stages of pulmonary tuberculosis.

Enlarged lymphatics in the neck, especially with old scars, are evidence in favor of tuberculous disease. Enlarged lymphatic glands in the chest produce engorged veins on the front of the chest and even on the temples, irregular pupils, hoarseness and spasmodic cough, at times resembling whooping cough. They are marked by dullness over the upper four or five dorsal vertebrae or on one side between the spine and the scapula. The whisper heard over the cervical vertebrae, which is normally lost over the first or second dorsal vertebra, is transmitted to the fifth dorsal vertebra or even lower.

A peculiar form of pectoriloquy is also heard over the upper dorsal vertebra. If the words one, two, three, are repeated aloud slowly and well separated, one hears the spoken word and also the word in a whisper—both at once, as if the patient spoke and whispered at the same time. This has been called the concomitant whisper. The symptoms and signs of enlarged intrathoracic glands may also be produced by an aneurism, or a mediastinal abscess or new growth. The X-ray is useful in such cases.

In all investigations system and thoroughness are needed and no less in diagnosing tuberculosis than elsewhere. After hearing the patient's story questions should be asked not only to elicit other symptoms of pulmonary disease but also to bring out symptoms connected with all the other organs of the body, always remembering syphilis. An open mind is needed, for the object of the investigation is to discover the cause of our patient's ill health rather than to prove tuberculosis present.

Physical examination should cover the ears, face, nose, tongue, naso pharynx, pharynx, larynx, and eyes, noting any evidence of eye strain, also the hands and fingers for clubbing, etc., and the ankles for edema. The chest is then examined carefully, any deformity noted and the condition of the heart and lungs recorded. Last, the abdomen should be examined as a routine and also the urine. Rectal and vaginal examinations are not made unless the verbal examination indicates trouble in these directions.

Pulmonary tuberculosis is essentially a localized disease (excepting miliary tuberculosis). To be distinctive of tuberculosis abnormal physical signs must be first limited to circumscribed areas, and second, must be constant in the areas involved.

There are four regions, in one or more of which such signs of early tuberculosis are usually found and in which dullness, etc., are most marked in widely distributed lesions. These are the apices of the upper lobes above the second ribs and scapulae and the apices of the lower lobes between the spine and the scapula on either side at the level of the fourth or fifth dorsal vertebra.

In children initial lesions at the base are not uncommon and the region around and below the nipple frequently shows fine rales after cough as the first sign. In adults basal lesions are usually secondary, are not easily recognized at an early period, and are usually, when present, accompanied by well-marked signs of consolidation at one or more of the above-mentioned regions of election.

As a rule, lesions at the upper part of the lung or the apices of the lower lobes should be considered tubercular and lesions at the base nontubercular until the contrary can be proven.

In drawing conclusions it is needful to distinguish between clinical and pathological tuberculosis, that is, between active tuberculosis and tuberculosis which is healed or entirely inactive.

A considerable proportion of healthy people show more or less abnormal physical signs. Not infrequently one apex is notably deficient in resonance and the vocal and respiratory signs are changed. If there are no symptoms whatever we must consider such a condition as a healed tubercular lesion or a fibrosis from other causes.

On the other hand, if there are even slight changes in physical signs at one of the regions of election, together with cough, blood spitting, rapid pulse, slight fever, emaciation, impaired strength and energy, digestive disturbances, an unstable vasomotor system, chest pains, or any two or three of these symptoms, the diagnosis of pulmonary tuberculosis would be well established.

If several of these symptoms have been present for a time and are not otherwise accounted for, the diagnosis of tuberculosis should be made even if no definite lesion in the lung can be recognized. Diagnosis on symptoms alone is more probably correct in young people (12 to 25 years old), as the so-called latent or pretubercular stage is met with much oftener then than in later life.

A tentative diagnosis for purposes of further observation may be made on very few symptoms or signs.

A positive diagnosis should rarely be made in the absence of all symptoms unless tubercle bacilli are found.

A positive diagnosis can and should be made not infrequently on symptoms alone.

The most difficult cases are those which present physical signs of pulmonary tuberculosis with some symptoms, and which also show another disease which might account for all the symptoms just as well as tuberculosis would account for them. In such a case it is the part of wisdom to consider both diseases as present and active until the results of time and treatment render a different decision possible. If there is enough sputum it should be tested for albumen. The presence of albumen would indicate active tubercular disease, while the absence of albumen would favor an inactive or healed pulmonary tuberculosis, or some nontubercular pulmonary lesion.

Certain conditions, more than others, lead to confusion in diagnosis. Apical collapse or induration caused by adenoids or other obstruction of the upper passages is an example. Such an apex will present all the physical signs of tuberculous infiltration unless it be rales. Even rales may be present temporarily after acute bronchitis, but they will disappear in a few weeks. There may even be a few fine crackles at any time after the first deep breath or cough, but these quickly disappear; they are present one moment, absent the next. In contrast with tubercular disease, tubercle bacilli are absent, the condition is usually limited to the right apex while the three other areas of election are clear, the motion of the diaphragm is normal, and, most important of all, symptoms of tuberculosis are absent. Removal of the obstruction from the upper air passages causes partial or complete return of the signs to normal. Such a condition with tuberculous symptoms must be diagnosed tuberculosis.

Marked scoliosis may produce impaired resonance over lung tissue adjacent to the convexity. For instance, if the upper or dorsal convexity of the scoliotic curve is to the right impaired resonance is present over the right apex in the back, also to a less degree over the left apex in front. If scoliosis is marked and presents a strong secondary convexity to the left in the lower dorsal and lumbar region impaired resonance may be found over the left base behind and the right base in front, but is less marked than the change at the apex.

With poor resonance or dullness over the right apex due to tuberculous infiltration, we would expect to find sharpened breath sounds over the dull area and impaired motion of the right diaphragm, but in changes due to scoliosis we find, on the contrary, no sharpening of the respiratory sound at the dulled right apex but a sharpening of this sound at the left apex, especially in the back, and further we find the left half of the diaphragm moving poorly and on a somewhat elevated plane.

Hang-over rales after acute bronchitis may be present over such a scoliotic apex for two or three weeks after the other portions of the lungs have cleared, but are not permanent. Tubercle bacilli are absent, and the symptoms of tuberculosis are wanting.

Acute bronchitis, without either of the above conditions, may produce plugging of a bronchus with collapse of more or less tissue at one apex with physical signs like those of tuberculous infiltration. However tubercle bacilli are absent, the signs of acute bronchitis are present, over the rest of the lungs, symptoms commensurate with tuberculous lesions of equal extent are absent, and finally the condition clears up in a few weeks.

Bronchiectasis and chronic bronchitis at times simulate more advanced chronic tuberculosis. The symptoms, however, are not as severe as in equally extensive tuberculosis. We are given a history of cough with moderate or profuse sputum lasting five, ten, or even fifteen years; we find numerous rales widely scattered and perhaps a basal cavity; hemorrhages may have been common, and yet the patient is in fairly good general condition and working every day.

Tubercle bacilli are absent and the larynx is negative, conditions not often present in old extensive tuberculosis. Moreover, the rales predominate at the base while dullness, etc., are wanting at the favorite sites of tuberculosis. Bronchiectatic cavities are generally basal, tuberculous ones are apical. (One must remember the location of the apices of the lower lobes.)

Bronchiectasis frequently gives a peculiar sputum which separates on standing into a frothy layer on top, a greenish fluid layer in the middle, and a heavy purulent layer at the bottom.

Hamman reported a case supposed to be basal tuberculosis largely because the case gave a positive general reaction to tuberculin with apparently a focal reaction with increased rales over the pulmonary lesion. This case later came to autopsy and proved to be chronic bronchitis with many small fusiform dilatations of the finer bronchi, but with no evidence of tuberculosis of the lungs. The focal reaction was a coincidence from exacerbation of the bronchial disease.

Chronic influenza with apical dullness, etc., is distinguished by the presence of the influenza bacillus in the sputum and the absence of tubercle bacilli.

Syphilitic lesions are usually in the central or lower parts of the lung. The apices are clear. Tubercle bacilli are absent. Symptoms are less severe than in tuberculosis in proportion to the physical signs. The condition of the larynx may be important. The Wasserman test is positive.

Pulmonary abscess usually gives a history of preceding pneumonia and of the evacuation of considerable pus on one or more occasions. It is usually in the lower part of the lung. There are at first signs of consolidation with or without rales; later there are signs of cavity. The regions of tuberculous election are negative. Two cases were sent to the sanatorium during my residence, both boys about seven years old. In one the abscess had ruptured; in the other rupture took place after admission. This case recovered spontaneously. The other recovered after an operation had been performed.

An unresolved pneumonia sometimes gives us difficulty by producing chronic ill health. The history, the location at the base, the absence of signs at the points of tuberculous election, the apices of the upper and lower lobes, and the presence of pneumococci, with the absence of tubercle bacilli, suffice for differentiation.

Malignant disease of the lung often shows a primary focus elsewhere. Accompanying plural effusion is likely to be bloody, frequent hemoptysis is present, there are no tubercle bacilli, particles of cancerous tissue may possibly be found, dullness is irregularly located, the breath sounds may be dulled or absent instead of sharpened as is usual over tuberculous dullness. The symptoms may be for a time less, later they may be more, than in tuberculosis of similar extent.

Tuberculosis may come on like asthma, especially when it begins as a central peribronchitis with sonorous or squeaky rales, dyspnoea, etc. The dyspnoea is not typically asthmatic and some apical lesion generally can be made out. When tuberculosis is engrafted on pre-existing asthma we will find dullness, etc., at some of the apical regions and the rales at these areas will be proportionately more moist and more numerous than over other parts of the lung as well as more permanent.

Actinomycosis and streptothricosis are usually mistaken for a time for tuberculosis. They present, however, a typical distribution, are often more like bronchitis, and are accompanied by a true anemia, the red count may be as low as 2,500,000. The history of the case is of value and the microscope settles the diagnosis by showing the fungus instead of tubercle bacilli. The trouble is that as a rule no one thinks to look for the fungus until late.

The list of diseases that have been mistaken for pulmonary tuberculosis is endless. One report tells of a case of chronic localized pulmonary disease at first considered tuberculosis but in which Loeffler's bacilli were finally found, and which made a speedy recovery after the injection of antitoxine.

One very interesting case sent to the sanatorium had lost twenty-five pounds in three or four months, ran a daily temperature of 100 to 101, had some dyspnoea, a persistent cough with a good amount of sputum, and had had some night sweats. The sputum was negative and had been so when previously examined. Physical examination showed absence of dullness and changes in whisper and respiratory sounds, etc., at the apices. A few fine rales were present at the apices, which increased in number and size to the base where they were many and coarse. The heart was negative. A diagnosis of bronchitis was recorded. Routine examination of the abdomen revealed a large tubercular left kidney and the urine presented corroborative findings. The patient was returned to the city and the kidney removed. Recovery was rapid and complete. The pulmonary signs disappeared.

Cases are frequently met with which must be kept under observation for some time and examined repeatedly before it is possible to decide positively whether pulmonary tuberculosis is present or not or to assign the correct degree of importance to each of several ailments present.

When, after exhausting all means of inquiry, one is still in doubt, the diagnosis should unfailingly be tuberculosis. It is far better that the innocent should bear the stigma of tuberculosis rather than that one early case of tuberculosis should be allowed to drift into the advanced stages.

The diagnosis of early tuberculosis should always be communicated promptly to the patient, accompanied with a liberal amount of hope for cure.

Many patients have complained bitterly to me that such information had been withheld and that they had, therefore, not acted as promptly and energetically as they would have done had they been warned. None have ever complained of having been pronounced tubercular at too early a period.

SOME PROBLEMS IN THE X-RAY DIAGNOSIS OF URINARY CALCULI.

Read before the Schenectady County Medical Society, November 9, 1915.

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The advent of the Röntgen rays as assistant in the diagnosis of both surgical and medical lesions has, perhaps, been of greater service to Uruology than any other branch of our profession excepting orthopedics, and yet this same valuable, almost indispensable, aid is a two-edged sword to be used with care lest in our enthusiasm we are led to make serious blunders. This is equally applicable in the interpretation of both negative and positive findings.

In order to illustrate the more important difficulties encountered in this work I have reviewed those cases of suspected urinary calculi which have been referred to Dr. Stanton for diagnosis during the period that I have been doing his X-ray work. I am indebted to Dr. Stanton for the privilege of reporting the histories and other data in the cases selected for this paper.

It has long been recognized that a certain proportion of urinary calculi do not offer sufficient resistance to the X-rays to register shadows on a photographic plate, and thus if the radiograph alone is relied upon for diagnosis a lamentable mistake may be made. In discussing the failure of the X-ray in detecting stones Hugh Cabot* says: " In one hundred and twenty-seven cases in which satisfactory X-rays were obtained eight were entirely and persistently negative which represents a failure of six per cent. This is, I believe, considerably short of the real percentage of failures, because in many of these cases X-rays were repeatedly taken over a period of weeks or months and if a positive plate were finally obtained sight of the negative one is entirely lost. I am inclined to think that fifteen per cent is nearer the percentage of failures even in the hands of thoroughly expert radiologists."

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* Cabot, Hugh. *Surg. Gyn. & Obst.*, Oct. 19, 1915.

But of far more serious import from the patient's standpoint is the misinterpretation of positive findings. If the hundreds of cases who have been condemned to operation because the shadows of phleboliths, fecoliths, seminal vesical stones, prostatic concretions, calcified lymph nodes, and even gas bubbles in the intestines, were brought as witnesses to the necessity of exhaustive diagnosis in other fields as well as the X-ray, the percentage of mistakes would be much lessened. The X-ray is but one out of three indispensable means of diagnosis in cases of suspected urinary calculi. The other two are: first, a careful history and physical examination; second, a cystoscopic exploration and study of the urinary findings from bladder and kidney. The X-ray should be used in conjunction with the latter in order to map out the ureter and pelvis of kidney by means of lead catheter and collargol or thorium pyelography. If all three of the above methods are used the percentage of mistaken diagnoses should be much reduced.

In reviewing our experience with the X-ray in the diagnosis of urinary calculi we find that from the radiographic viewpoint the cases may be grouped into three general classes, examples of each of which I here present.

First: The X-ray findings may be positive and easily confirmed by cystoscopic and other data.

Second: The X-ray findings may be negative* and very misleading unless subordinated to other available positive data. Negative cases may suddenly become positive due probably to some change in the composition of the calculi.

Third: Apparently positive X-ray findings may prove to be erroneous when checked by cystoscopic and other means of diagnosis.

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* Of course X-ray findings may be negative due to poor plates. Likewise occasionally an exceptionally good plate may show shadows not demonstrable by ordinary good technic. In the long run the value of the method must depend on the average good plate. In our own work no plate has been deemed satisfactory which did not show the outlines of the psoas muscle as well as the transverse processes of the vertebrae. Errors due to failure to include the proper areas in the plate have been avoided by taking sufficient plates to include the entire urinary tract.

Case I.—Female, age 51, referred by Dr. Treder. History dates back to 1910 at which time she had cystitis lasting six weeks with burning urination and frequency. Following this an operation was performed for rectocele and cystocele. Anterior colporrhaphy and perineorraphy and a laparotomy for removing both tubes and ovaries and appendix. Careful examination at this time showed gall bladder and both kidneys to be apparently negative with the exception that the left kidney was a little small. Urinalysis at this time showed a few pus cells. The patient was lost track of until May, 1914, during which time she had been treated for a urinary infection by autogenous vaccines, and was repeatedly reported as cured but at this time was absolutely no better. A history taken in April, 1915, showed no pain but a constant bladder trouble, the patient arising one to two times a night and voiding every hour or so during the day, her chief complaint being a chaffing sensation at the meatus and burning on urination. X-rays then showed in pelvis of right kidney a shadow, irregular in outline, approximately four centimeters long and one and five-tenths centimeters wide. X-ray catheter passed up to the stone. Operated April 30th, 1915. Nephrectomy. Kidney pelvis contained three irregular hard stones. Here we have a patient invalided for six years, subjected to one misdirected operation and hundreds of dollars of expense for other inappropriate treatments. During this time her daughter had a ureteral calculus diagnosed successfully by the X-ray and removed, and yet no one had even suspected the necessity of an X-ray until April, 1915. Now in fifteen minutes the diagnosis became clear and the patient was for the first time on the right track for recovery.

Case II.—Female, age 40, referred by Dr. Woodall, March 27, 1914. History dates back for two years of distinct pain and tenderness in left lower quadrant, and a constant tired feeling. A month ago had bloody urination for two days although never before nor since. Some edema of lower extremities during the past winter. About six years ago had an attack of cystitis, urinating every few minutes with much burning distress. This attack cleared up in a few days but she had had several attacks since. Physical examination showed chest to be negative, slight tenderness in epigastrium, distinct tenderness in left lumbar region on deep pressure. Cystoscopic showed a slight diffuse cystitis, a normal right ureter with normally spurting clear urine. On the left side the meatus normal with clear urine escaping in large quantities. Catheters passed easily with no obstruction to both kidneys. X-rays taken at this time showed pelvis of kidney and calices to be completely filled with stones roughly outlining the whole of the pelvis and four main calices. Operated April 7th, 1914. Nephrectomy. One large stone completely filled pelvis with processes extending into calices, also many small stones were scattered throughout the substance of the kidney.

Case III.—Male, age 30, referred by Dr. Sauter, June 29, 1915. Gives a history of straining his back upon the right side one month previous while carrying a canoe. Since then has been conscious of a dull steady pain in right kidney region. On June 5th he began to pass bloody urine and has had constant hemorrhage ever since, passing distinct clots. No frequency and no inconvenience in passing clots. Urinalysis showed very bloody urine containing albumin. X-ray plates taken at this time disclosed a definite calculus overlying the 12th rib on the right side two and one-half centimeters from its tip. This patient passed from our care, later being operated by another surgeon, who did a nephrectomy because of hemorrhage occurring during an attempt to remove the stone from the pelvis of the kidney.

Case IV.—Male, age 29, referred by Dr. Bryant, June 1, 1914. Patient gave history of attacks of pain low down in right inguinal region during the last six months accompanied by frequent bloody urination. Two years ago he first had attacks of severe pain in right lower quadrant accompanied by nausea, vomiting and urinary frequency, but no visible blood until the attacks six months ago. The first attacks lasted only for a day or two but now there is a dull pain constantly present with uninterrupted urinary frequency. Pain radiates to small of back but not to testicle nor down leg. Urinalysis at this time showed a reddish urine with a heavy trace of albumin, Sp. Gr. 1.025. Miscroscopically containing red blood cells, leucocytes and an occasional granular cast. X-rays taken in conjunction with cystoscopic examination showed a urinary calculus about two centimeters in diameter, rounded in outline, lying just below the twelfth rib on the right side. The ureteral catheter passed to within three centimeters of lower edge of stone. Patient operated June 19th, 1915. Nephrotomy. Stone size of large marble removed from pelvis of kidney.

Case V.—Male, age 31, referred by Dr. Woodall, June 11, 1915. Patient first seen with an attack of la grippe. One day later he developed a typical Dietl's crisis. Urine negative except for hyaline casts. A few days later X-ray examination demonstrated a calculus low down in the pelvis on the left side five millimeters in diameter, proved by cystoscopic examination to be a ureteral stone near the bladder wall. At this time the urine contained blood. Operation, June 13th, 1915. Left McBurney's incision, extra peritoneal down to ureter. A small stone was palpated within the ureter three centimeters from the bladder wall, and was removed through a small incision in the ureter.

Case VI.—Male, age 65, referred by Dr. Racette, April 23, 1915. History shows that for seven or eight years he had trouble in passing urine, with difficulty in control, passing a little at a time and dribbling continuously. Up about every half hour during night. Two years ago he passed blood a few times in urine. Blood pressure 160. Cystoscopic examination showed a large prostatic urethra and large left lobe of prostate. The cystoscope grated upon the stone within the bladder but the same could not be seen owing to the fact that it was pushed above the cystoscope as the latter was introduced into the bladder. Urinalysis showed turbid acid urine, Sp. Gr. 1020, heavy white sediment, heavy trace of albumin, with shreds of pus and bacilli. X-ray showed oval shadow of a calculus seven centimeters by four centimeters in diameter. Operated April 24, 1915 under local novocaine anaesthesia. Suprapubic cystotomy with removal of a large oval stone, hard in consistency, of the above mentioned diameter.

Under the second group are the following.

Case I.—Male, age 32, September 11, 1913. Dull pain in the right kidney region with frequent urination which began three weeks ago. Another surgeon had made a diagnosis of tuberculosis of the right kidney and he presented himself for a confirmation of this diagnosis before submitting to operation. The bladder urine was turbid, acid, with a trace of albumin, microscopically containing pus and blood with many rod-shaped bacilli, also a few cocci. Cystoscopic examination showed a very marked cystitis cystica with pus, blood and bacilli from the right kidney and clear urine from the left. Microscopic and guinea pig tests were both negative for tubercular bacilli. X-ray plates taken at this time were negative for stones. Operation November 5, 1913. Kidney exposed with the intention of doing a nephrectomy but on finding a large calculus filling the pelvis of the kidney with branches extending into the calices it was decided to remove the stone by pelviotomy. No other stones were palpated in the kidney at this time. Convalescence from the operation was rapid and the patient soon returned to work but the urine from the right kidney continued to contain some pus and numerous bacteria which persisted in spite of vaccines and urinary antiseptics. In April, 1914 the pus in the urine became more abundant and the patient on several occasions had a slight fever. X-rays taken at this time were again negative. Nephrectomy April 21, 1914. In the calices of the kidney were four calculi moulded to fit the space they occupied, the largest of these measuring four millimeters in diameter, two centimeters in length. Chemical examination showed them to be composed chiefly of calcium oxylate. It is interesting to note that the X-ray examination was negative in the presence of large stones before each operation in this case.

Case II.—Female, age 30, referred by Dr. Bryant, March 29, 1913. Previous to the onset of this illness she had always been healthy and denies any symptoms referable to the urinary tract. Four months ago she fell striking the left lumbar region against the corner of a table. Pain and discomfort date from this injury, and a few weeks later an abscess formed in the left lumbar region and was lanced by another physician. It discharged for a month and was injected with bismuth paste two or three times a week for another month, finally closing up. A few days ago it began to swell and pain and reopened with a discharge of a large amount of pus. She then consulted Dr. Bryant who referred her to Dr. Stanton. Examination showed a poorly nourished, decidedly septic woman, with a large inflammatory mass in the left lumbar region, with pus discharging through a narrow sinus at the point of previous incision. The urine examination made at this time was entirely negative and X-ray plates apparently showed only the scattered masses of bismuth lying in the pockets of the abscess cavities. On April 3rd the abscess was given free drainage by a posterior lumbar incision with rubber tube drains inserted into the several pockets of the abscess. Additional X-rays taken May 7th and August 5th showed masses of bismuth scattered through the infected area, but nothing suggesting a stone. On August 11th an additional incision was made in the left inguinal region and a secondary abscess containing about 200 cubic centimeters of pus drained. With continued free drainage the condition of the patient improved and the inflammatory mass became smaller and more sharply localized until by the middle of November, 1913, it could be palpated as a kidney-like mass lying mostly below the level of the umbilicus in the left side of the abdomen. During all of this time repeated urine examinations were entirely negative and cystoscopic examination was negative except that no urine flowed from the left ureter. There was never anything to suggest urine in the drainage from the incisions. On November 30th bismuth was injected into the abscess cavity and another X-ray taken. Later a ureteral catheter was passed to the left kidney and a collargol plate made. These plates showed shadows of a triangular stone situated in the upper end of the ureter. The possibility of the stone showing in the plate had been, however, apparently ruled out by the previous negative plates and the stone shadow was now interpreted in the collargol plate as a greatly contracted pelvis filled with collargol while in the other plate it was entirely overlooked. On January 5th, 1914, the left kidney was removed by a subcapsular resection and the stone imbedded in the ureter at the uretero-pelvic junction was only accidently discovered while passing a stitch for the ligation of the renal vessels. Owing to the very dense scar tissue surrounding the kidney and the fact that any attempt to reach this stone would transform a safe into a decidedly dangerous operation in a poor subject it was decided to leave the stone. Since the nephrectomy this patient has gained thirty pounds in weight and feels well except for a small sinus in the left loin. Ultimately the stone will probably be spontaneously extruded, or it may be removed under local anaesthesia if it ever becomes worth while to urge its removal.

Case III.—Male, age 25, referred by Dr. Earl Lathrope of Buffalo, March 15, 1915. History of bloody urine two years ago with a soreness in the bladder region ever since. At times there is frequent urination, patient arising once or twice at night, this urination being accompanied by a burning pain in the end of the penis. Two years ago before the trouble began he passed a number of small soft concretions. Never any renal colic. X-rays taken in Buffalo the summer previous proved negative. Those taken by us a year later showed two bladder stones roughly oval in shape two by two and five-tenths centimeters and two by seventenths centimeters respectively in diameter. These were confirmed by a cystoscopic examination and after being crushed by a Lithotribe were removed by the combined cystoscope and evacuator devised by Dr. Stanton.

Case IV.—Male, age 42. History of left renal colic in 1899, later several attacks of right renal colic with a severe attack in 1911. X-ray plates taken in January, 1912, were negative and several subsequent plates were negative. In May, 1913, he had an attack accompanied by some blood in urine. Immediately after this two stones were demonstrable in the left ureter, and these stones showed plainly in all subsequent plates until they were removed by operation in December, 1914. The clinical evidence is all in favor of these stones having been present when the early negative plates were taken and it is altogether probable that some chemical change in some way related to deposition of blood pigment on the stone in May, 1913, rendered them suddenly opaque to the Röntgen Rays. That these calculi in this case were not, at least in the early stages of their formation demonstrable by the X-ray is further proven by the fact that three days after a negative X-ray taken March 15th, 1915, this patient passed a five millimeter in diameter stone from the right kidney. Physical and chemical examination of all calculi recovered from this case showed them to be amorphous calcium carbonate.

Case V.—Male, age 55, referred by Dr. MacElroy. At the age of fifteen had an attack of sudden right sided pain. Another ten or fifteen years later, and one again at age of forty. At that time had frequent urination with bloody urine. He was removed to a hospital where the diagnosis of "contracted bladder" was made. Lesser attacks from time to time since. Present illness began three months ago when he developed a constant pain in the lower right quadrant and right kidney region. Marked loss in weight and strength. Physical examination showed an anaemic, cachectic looking man with a mass the size of a large grape fruit in the region of the right kidney. Cystoscopic examination showed only a few drops of pus and no urine from the right kidney. A functional test showed the left kidney excreting the total phenophthalein in five hours. The bladder urine was full of gram-positive intracellular diplococci. X-ray plates taken at this time failed to show recognizable stone shadows. Operation May 14th disclosed a large firmly fixed mass with gross characteristics of a malignant growth occupying the region of the right kidney. If malignant it was thought useless to remove such a growth and the incision was closed after taking tissues for microscopical examination. Sections cut in our own laboratory left the question of malignancy open to doubt and tissues sent to the Bender Laboratory showed only chronic inflammatory changes. Four days after the first operation the patient was again operated and tumor mass removed which proved to be a pyonephretic kidney with the lower pole replaced by a carcinomatous new growth which had invaded and closed off the pelvis and ureter. Imbedded in the upper ureter was a large mulberry type stone and the dilated calices of the persisting portion of the kidney contained several more calculi. It is noteworthy that in this case none of the stones showed in the X-ray while the outline of the hard tumor mass could be made out.

The third group contains the following cases:

Case I.—Male, age 45, referred by Dr. Woodall, September 23, 1915. History dates back for twenty years of frequent urination and cystitis. Two years ago he had to give up work because of bladder trouble and at this time passed some gravel. At the date seen he had intense burning pain in the urethra both during and following urination and passed much pus. Urinary frequency about every two hours. Four weeks ago he passed some clots of blood. Physical examination negative except for tender area over bladder and extreme phimosis. X-ray plate of pelvis showed an oval stone four by two and five-tenths centimeters in diameter also several small calculi low down in pelvis. Because of extreme phimosis a cystoscopic examination was impossible. Operated September 25, 1915. Circumcision. Suprapubic cystotomy with removal of a large oval stone of the above described dimensions. Several small diverticulae which could not be explored satisfactorily from within were discovered, so the peritoneal cavity was entered and the diverticulae palpated from without the bladder. These did not contain calculi and the small shadows on the X-ray plate were found to be due to phleboliths which could be palpated in the pelvic peritoneum. A combination of circumstances including the impassible phimosis preventing cystoscopic examination and the several diverticulae making palpation from within the bladder impossible, made it very difficult to disprove the apparently definite X-ray findings in this case, which were partly true but very largely misleading.

Case II.—Female, age 53, referred by Dr. Gilbert, July 6, 1915. Patient gives a history of frequent urination and bladder irritation since the previous February. Never any blood in urine. Arises from one to four times a night and has varying frequency during the day. Physical examination negative except for definitely palpable spleen. Cystoscopic examination showed a markedly contracted urethra and some trigonal cystitis, otherwise negative. X-ray plates showed a small round shadow low down in pelvis probably due to a phlebolith as nothing was found in the cystoscopic examination.

Case III.—Female, age 18, September 28, 1914. Presents a history somewhat suggestive of a ureteral calculus. Gradually increasing pains at intervals in the right side starting low down in the right quadrant and radiating downward, accompanied by nausea. Lately this pain has troubled her practically every day. Twice when these pains were severe she was unable to pass any urine. Has never passed blood and has had no frequent urination. Physical examination showed marked resistance with sharply localized tenderness at McBurney's point. X-ray plates at this time showed an irregular shadow just below the transverse process of the fifth lumbar vertebra on the right side. A diagnosis was made at this time of chronic appendicitis with probable calcified lymph gland. Another X-ray taken April 6, 1915 showed a similar shadow. As the patient was still suffering from the same symptoms she was operated April 7, 1915. Exploration showed no stone in ureter but a calcified enlarged mesentery gland. Definite chronic appendix. Appendectomy.

Case IV.—Female, age 35, referred by Dr. Scott, March 16, 1915. Her history is that of a typical long drawn out cystitis following childbirth sixteen years previous with periods of frequent urination accompanied by burning and pain in the neck of bladder. Physical examination negative except for firm old inflammatory process in left fornix. Cystoscopic and urine examination showed a chronic diffuse cystitis evidently a subsiding of an acute exacerbation. X-ray plates showed a small round shadow low down in the pelvis and in all probability a phlebolith as nothing was found in the cystoscopic examination to confirm a ureteral stone diagnosis.

Case V.—Male, age 53, November 2, 1914. Gives a history of fifteen years of lumbago-like pain on both sides of the back and for three or four years a gradually increasing urinary frequency, at present voiding every fifteen to thirty minutes. Blood pressure 210—urine examination negative except for a few red blood cells. Cystoscopic examination negative except for marked polyuria from both kidneys. A preliminary Röntgenogram showed two calculi low down on the right side of pelvis and a small calculus slightly higher up which were thought at first to be possible ureteral stones, but plates taken after X-ray catheter had been passed showed the lower calculi to lie some distance from the ureter possibly being seminal vesical stones or phleboliths. The shadow higher up lay directly in the path of the ureter but there was no resistance offered on passing the catheter and the probability is that the shadow was due to a small calcified gland lying beside the ureter. Diagnosis: probably chronic nephritis with high blood pressure and polyuria.

Case VI.—Male, age 53, referred by Dr. Canna of Amsterdam, October 7, 1915. Patient gave a history of frequent urination over a period of four years, each attack lasting about a week. There was never any blood passed and no pus until after being catheterized in March, 1915. In June, 1915, he was operated by another surgeon and a stone removed from the bladder, the bladder healing in about three weeks, but following the operation there was no relief from the cystitis. Ever since that time he has had constant irrigations of boric acid and other antiseptics but without any improvement in his condition. At present he has to get up seven or eight times a night. Physical examination negative except for double inguinal hernia and hemorrhoids. Urine examination showed a trace of albumin and much pus. Cystoscopic examination showed a marked chronic cystitis involving the base and most of the fundus of the bladder. Both ureters easily catheterized and there was no noteworthy pus in the urine collected through the ureteral catheters. There was a well marked median bar at the internal urethral orifice, and several ounces of residual urine. X-ray plates showed several irregular three millimeters in diameter shadows in the bladder region. As the cystoscopic examination showed no stones these shadows were probably due to collections of pus infiltrated with argyrol with which solution the patient had been irrigated for some weeks.

In conclusion I wish to emphasize that we consider the X-ray to be the most valuable single factor in the diagnosis of urinary calculi and to be of indispensable service when used in conjunction with a carefully taken history and exhaustive study of the clinical aspects of the case. Used alone, however, without proper confirmation by such means as I have mentioned it may lead us into serious error almost as often as it would furnish a correct diagnosis.

THE VALUE OF THE CHEMICAL EXAMINATION OF THE BLOOD IN THE DIAGNOSIS OF RENAL INSUFFICIENCY.

Read by invitation at the Annual Meeting of the Medical Society of the County of Rensselaer, Troy, N. Y., December 15, 1915.

By VICTOR C. MYERS, Ph. D.,

Professor of Pathological Chemistry in the New York Post-Graduate Medical School.

For a long time the clinician has been accustomed to rely upon the examination of the urine for his index of the efficiency of the kidney. In nephritis the volume, specific gravity, albumen, casts, and occasionally, the chlorides and total nitrogen or urea have covered the examinations made. More recently the ability of the kidney to eliminate various substances administered, either per os or parenterally, has been practically employed as a means of determining its functional activity. The phenolsulphonephthalein test of Rowntree and Geraghty[1] and the lactose and potassium iodide tests of Schlayer[2] have found extensive use, especially the former. The phthalein test, although introduced only five years ago, has received almost universal recognition, and even Schlayer now admits the test to be superior to any other functional kidney test.

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[1] Rowntree and Geraghty. *Jour. Pharm. and Exper. Therap.*, 1910, i, 579.

[2] Schlayer and Takayasu. *Deutsch. Arch. f. klin. Med.*, 1910-11, ci, 333.

In the last number of the Archives of Internal Medicine, Mosenthal,[3] in Janeway's Clinic at Johns Hopkins, has excellently discussed a number of the well-known clinical observations on the urine. He has pointed out that a very considerable amount of information may be obtained from the observation of the volume, specific gravity, chloride and nitrogen output of the night and two hourly day urine specimens of nephritic patients. The normal individual is able to secrete at night a urine of high concentration, but in nephritis the specific gravity may be fixed at a constant level with a very definite concentration of chlorides and urea. The importance and diagnostic value of this has not been fully appreciated, primarily because of the time and care required in the collection and analysis of the specimens.

Recent investigations in physiological chemistry have all emphasized the importance of a more accurate knowledge of intermediary processes. Up to ten years ago the more important investigations on metabolism were those in which deductions were made from the variations in the gross end products, CO_2 and N. During the past ten years investigations have considered not only the total nitrogen of the urine, but more especially the compounds from which it is derived, i. e., urea, creatinine, uric acid and ammonia.[4] Urea, on the one hand, has been found to be almost entirely exogenous, while creatinine, on the other hand, is entirely endogenous. Despite the increased insight into the intermediary processes which has been obtained from the analysis of the excretions of the kidney, it has seemed necessary to obtain more direct information regarding processes taking place in the body. The analysis of blood has, in part, furnished this information and, in addition, supplied data of very great diagnostic value.

The functional condition of the kidney may obviously be ascertained by two quite different modes of attack—by the amount of certain substances excreted by the kidney, or by their retention in the blood. Since the introduction during the past three years of simple methods of blood analysis,[5] especially by Folin, the latter method has received considerable attention. Simple, but relatively accurate methods for the nonprotein and urea nitrogen, uric acid, creatinine and creatine have thrown light on many disputed questions of abnormal metabolism and, further, have disclosed new possibilities in the way of practical diagnostic tests. The retention of the various nitrogenous waste products in certain forms of nephritis has long been known, although it has been only recently that we have had adequate data on the distribution of these compounds.

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[3] Mosenthal. *Arch. Int. Med.*, 1915, xvi, 733.

[4] Cf. Folin. *Amer. Jour. Physiol.*, 1905, xiii, 66.

[5] Description of these methods is given by Myers and Fine. Chemical Composition of the Blood in Health and Disease, series of papers reprinted from the *Post-Graduate*, 1914-15.

Normally, the nonprotein nitrogen amounts to 25 to 30 milligrams, the urea nitrogen to 12-15 milligrams, the uric acid to 1-3 milligrams, and the creatinine to 1-2 milligrams, all calculated per 100 cubic centimeters of blood. As an illustration of the extent of retention, we have encountered figures of 370 milligrams for the nonprotein nitrogen, 300 milligrams for the urea nitrogen and 27 milligrams for the uric acid and 33 milligrams for the creatinine.[6] Both the urea and nonprotein nitrogen have received considerable attention as diagnostic tests. In cases in which the nonprotein nitrogen and phenolsulphonephthalein estimations have been simultaneously carried out, there has been a most excellent agreement between the two tests. There is this difference, however—the amount of phenolsulphonephthalein excretion shows the renal function at the moment, whereas the nonprotein and urea nitrogen are rather a measure between the amount of waste nitrogen produced in metabolism and that eliminated by the kidney. In the early stages of nephritis, the phthalein test yields the more valuable information, but after a decided retention has taken place, the nonprotein and urea nitrogen of the blood furnish a much more accurate index of the changes in the condition of the patient. With nonprotein nitrogen values over 60 milligrams and urea nitrogen values over 40 milligrams, the prognosis is generally regarded unfavorable.

As would seem probable, nephritis with retention is accompanied not only by an accumulation of urea in the body, but by other nitrogenous waste products as well, especially uric acid and creatinine. This has been amply demonstrated by the observations of Folin and Denis[7] and ourselves.[6] From the distribution of the nonprotein nitrogenous compounds in the blood and urine, it would appear that of the three constituents mentioned, creatinine was normally the most readily, and uric acid the least readily, eliminated, with urea standing in an intermediate position. From this it is logical to expect that the excretion of uric acid would be the first to be impaired. In gout this is apparently the only constituent for which the permeability is appreciably lowered, while in interstitial nephritis our blood studies appear to indicate that a retention of uric acid is generally the first to become evident.[8] It is interesting to note that von Noorden,[9] with very meagre data, appreciated this fact, for he writes: "Stripped of all unnecessary detail, this means that the retention of uric acid in the blood and the remaining phenomena of gout are the result of primary disease of the kidney." Again he writes: "It appears that continuous overloading of the blood with uric acid (nephritis) does not necessarily lead to gout and, moreover, that this overloading is not followed by uric acid deposition without the accession of another, still unknown, specific gouty factor."

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[6] Myers and Fine. *Jour. Biol. Chem.*, 1915, xx, 391.

[7] Folin and Denis. *Ibid.*, 1914, xvii, 487.

In harmony with this hypothesis we should next expect a retention of urea and, lastly, that of creatinine. This seems to correspond fairly well with the facts in most cases. It seems reasonable to conclude that when a noticeable retention of creatinine has occurred, the functional condition of the kidney has been gravely impaired. In our experience creatinine values from 2.5 to 3.0 milligrams per 100 cubic centimeters of blood should be viewed with suspicion and figures from 3.0 to 5.0 milligrams regarded as decidedly unfavorable, while figures over 5 milligrams probably indicate an early fatal termination.[10] Of 19 cases with over 5 milligrams, all that we have been able to follow, have died.

Theoretically, the amount of the increase in the creatinine of the blood should be a safer index of the decrease in the permeability of the kidney than either urea or uric acid, for the reason that creatinine on a meat free diet is entirely endogenous in origin and its formation (and elimination normally) very constant. It is worthy of note that there have always been good agreements between the creatinine and results with the phthalein test. In severe cases, however, the creatinine is much more valuable since slight changes in the condition of the patient are thereby shown where the phthalein is continuously negative.

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[8] Myers, Fine and Lough. *Proc. Soc. Exp. Biol. and Med.*, 1915, xiii, 5. Final publication to appear shortly.

[9] von Noorden. *Metabolism and Practical Medicine,* 1907, III, p. 669.

[10] Myers and Lough. *Arch. Int. Med.*, 1915, xvi, 536.

There seems to be no evidence which definitely supports the view that the retention of metabolic end products, such as urea, uric acid and creatinine, are in themselves the cause of uremic symptoms. N. B. Foster[11] has, however, been able to isolate as a gold salt a basic substance from uremic blood which causes death with convulsions when injected into guinea pigs.

As is evident from dyspnea, many advanced cases of nephritis develop an acidosis, due not to an increased formation of acid substances as in diabetes, but to the impaired elimination of the normally formed acid substances. During the past couple of years we have been accustomed to ascertain the degree of this acidosis from the CO_2 tension of the alveolar air or the hydrogen ion concentration of the blood. Van Slyke[12] has recently shown that the degree of this acidosis may be more simply and more accurately determined by ascertaining the CO_2 combining power of the blood plasma. We have very satisfactorily employed this method during the past six months.

The condition of the blood in parenchymatous nephritis is in our experience quite different from that of the interstitial type. In the parenchymatous form one finds only a moderately increased blood urea, but differing from the interstitial type; an increased concentration of chlorides is generally present, as might be expected from an accompanying edema.

That many advanced cases of diabetes develop nephritis is a well-known clinical observation. In the early cases of diabetes there is a direct relation between the hyperglucemia and the glucosuria, but this is certainly not true in cases of long standing with nephritis. It has been recognized for some time that hyperglucemia was present in many cases of advanced interstitial nephritis, though glucosuria was absent. The blood picture that we have observed in some cases of advanced diabetes is typical of interstitial nephritis, i. e., high uric acid values, with moderate retention of urea. These individuals[13] had marked hyperglucemias, in one case 1.1 per cent., but were unable to secrete urines of high sugar content. Cases might be cited with blood sugars up to 0.3 per cent. and over without glucosuria. In these cases the threshold point of sugar excretion has obviously been raised. The condition the clinician is endeavoring to treat by restricting the carbohydrate of the diet is the hyperglucemia, but the glucosuria is sometimes a very poor index to this condition. Since the determination of blood sugar may now be very simply carried out, the estimation of the sugar of the urine should be supplemented by the sugar of the blood.

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[11] Foster. *Proc. Soc. Exp. Biol. and Med.*, 1915, xiii, 39.

[12] Van Slyke, Stillman and Cullen. *Ibid.*, 1915, xii, 165.

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[13] Myers and Bailey. *Jour. Biol. Chem.*, 1916, xxiv (Feb.).

Editorial

> The Spanish historians who have written upon the conquest of Mexico, all mention the knowledge which the Mexican physicians had of herbs. It was supposed by these last, that for every infirmity there was a remedy in the herbs of the field; and to apply them according to the nature of the malady, was the chief science of these primitive professors of medicine. Much which is now used in European pharmacy is due to the research of Mexican doctors; such as sarsaparilla, jalap, friars' rhubarb, *mechoacan,* etc.; also various emetics, antidotes to poison, remedies against fever, and an infinite number of plants, minerals, gums, and simple medicines. As for their infusions. decoctions. ointments. plasters, oils, etc., Cortes himself mentions the wonderful number of these which he saw in the Mexican market for sale. From certain trees they distilled balsams; and drew a balsamic liquid both from a decoction of the branches, and from the bark steeped in water. Bleeding and bathing were their other favorite remedies. The country-people breathed a vein with a maguey-point, and when they could not find leeches, substituted the prickles of the American-hedgehog.
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> ***Life in Mexico.*** MADAME CALDERON DE LA BARCA.

A Hospital Milestone.

On Tuesday evening, February 8th, a plan to perfect the organization and efficiency of the medical and surgical service of the Albany Hospital was inaugurated.

It has been felt for some time that cordial co-operation between the visiting and resident staff was not obtained and that a proper degree of efficiency in the hospital work was lacking. Acting upon the suggestion of Dr. Ordway, chief of the medical staff, a meeting was arranged for the discussion of the current activities of the hospital, and an arrangement was made for the presentation of cases by the internes, with comments by the visiting physicians. The nurses of the Training School and the senior class of the College were invited as the guests of the evening.

The opportunity to present the various aspects of pneumonia and grip during the prevalence of the epidemic in the city was taken, and some ten cases were presented by Drs. Dickinson, Early, Heslin, Lyons and Tomlinson on the part of the internes of the hospital. The radiograms of the various cases were shown by Dr. Howard, and the clinical charts were thrown upon the screen. After the presentation of cases Dr. Mosher outlined the mental symptoms associated with pneumonia and febrile conditions in general, and was followed by Dr. Wadsworth of the State Antitoxin Laboratory, who gave a most concise outline of the bacteriological aspects of pneumonia, with special reference to the four bacteriological types. Miss Kirkbride and Miss Cooper, who have been engaged in the State Laboratory upon the differentiation of these types by special technique, and with the laboratory apparatus used in this work, demonstrated the routine procedure, showing the agglutinations and the methods of inoculating mice and the results.

That part of the evening assigned to the resident staff was accepted by them with marked enthusiasm, and it is now proposed that these meetings be held monthly. The departure was recognized by all who engaged in it as opening a new field of interest and activity in the hospital work. speaking well for renewed energy in the scientific aspect of the service.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, JANUARY, 1916.
COMPILED BY WILLIAM F. FULLGRAFF. REGISTRAR.

Deaths.

Consumption	19
Typhoid fever	0
Scarlet fever	0
Measles	0
Whooping cough	3
Diphtheria and croup	4
Grippe	24
Diarrheal diseases	3
Apoplexy	9
Pneumonia	17
Broncho-pneumonia	16
Bright's disease	13
Cancer	8
Accidents and violence	8
Deaths under 1 year	16
Deaths over 70 years	55
Total deaths	210
Death rate	22.47
Death rate less non-residents	19.58

Deaths in Institutions.

	Non-Resident.	Resident
St. Margaret's House	1	4
Child's Hospital	1	2
Homeopathic Hospital	2	8
Maternity Hospital	1	3
Albany County Hospital	3	4
Albany Hospital	9	15
Albany Hospital Camp	1	7
St. Peter's Hospital	5	8
Federation of Labor Camp	1	0
Home for the Aged	0	2
Public places	0	1

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	3
Scarlet fever	19
Diphtheria and croup	15

Chickenpox	27
Measles	172
Whooping-cough	72
Tuberculosis	36
Puerperal septicaemia	1
Mumps	57
Septic sore throat	46
Total	448

Number of days quarantine for diphtheria:
Longest...... 12 Shortest...... 5 Average...... 9 1-3
Number of days quarantine for scarlet fever:
Longest...... 36 Shortest...... 30 Average...... 32 1-6
Fumigations:
Houses.................. 144 Rooms.................. 624

Milk bottles disinfected	472
Cases of diphtheria reported	15
Cases of diphtheria, antitoxin used	13
Deaths after use of antitoxin	4

Communicable Disease in Relation to Schools.	Reported S. F.	Deaths M.
Public School No. 1	....	11
Public School No. 4	1	....
Public School No. 5	....	1
Public School No. 6	....	2
Public School No. 7	1	....
Public School No. 10	1	....
Public School No. 11	....	7
Public School No. 13	....	1
Public School No. 14	2	15
Public School No. 17	2	3
Public School No. 18	1	16
Public School No. 21	1	....
Holy Cross School	1	6
Cathedral School	....	1
Lady of Angels School	....	1
St. Ann's School	....	2
St. Mary's School	....	6

TUBERCULOSIS.

Living cases on record January 1, 1916		459
Cases reported:		
By card	33	
Dead cases by certificate	5	
		38
		497

Dead cases previously reported	14	
Dead cases not previously reported	5	
		19
Living cases on record February 1, 1916		478
Total tuberculosis death certificates filed during January, 1916		19
Non-resident deaths:		
Albany Hospital camp	1	
C. F. L. pavilion	2	
		3
Resident deaths		16

Report of Visiting Tuberculosis Nurse.

Old cases	0
New cases	19
Returned from hospitals	5
Total	24
Disposition of cases:	
Died	3
Sent to hospitals	4
To general tuberculosis nurse	6
At Dominican Convent	1
Remaining under treatment	10
Total	24
Visits made	21
Visits made, old cases	250
Calls at Board of Health office	30

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	21
Initial negative	270
Release positive	6
Release negative	56
Suspicious	7
Total	360

Test of Sputum for Tuberculosis.

Positive	11
Negative	37
Unsatisfactory	1
Total	49

Widals.

Positive	4
Negative	27
Suspicious	7
Total	38
Wassermann tests	1
Milk analyses	34
Water analyses	1

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	195
Old houses	48
New houses	147
Iron drains	49
Connection street sewers	8
Tile drains	8
Cesspools	45
Wash basins	65
Sinks	60
Bath tubs	63
Washtrays	57
Tank closets	82
Permits issued	58
Plumbing	53
Building	5
Plans submitted	17
Old buildings	5
New buildings	12
Houses tested	42
Peppermint	5
Water test	37
Houses examined	30
Re-examined	56
Valid	15
Without cause	15

BUREAU OF DEAD ANIMALS.

Animals removed from 1st precinct	23
Animals removed from 2nd precinct	20
Animals removed from 3rd precinct	27
Animals removed from 4th precinct	10
Animals removed from 5th precinct	23
Kennel cats removed	230
Kennel dogs removed	170
Total	503

Horses removed	50
Dogs removed	190
Cats removed	263
Total	503

BUREAU OF MARKETS AND MILK.

Public market inspections	15
Market inspections	66
Fish market inspections	6
Fish peddler inspections	1
Packing house inspections	1
Hide house inspections	1
Milk depots inspected	11
Stores inspected	178
Milk cans inspected	286
Lactometer readings	95
Temperature readings	95
Fat tests	84
Sediment tests	112
Bacterial counts	62
Complaints investigated	2
Special investigations	33

MISCELLANEOUS.

Work certificates issued to children	10
Vaccinations	13
Cases assigned to health physicians	146
Calls made	282
Number of complaints of nuisances	44
Privy vaults	1
Closets	2
Plumbing	10
Other miscellaneous complaints	31
Garbage collected from 1st district, barrels	192
Garbage collected from 2nd district, barrels	211

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR YEAR 1915.—Number of new cases, 2,450; classified as follows: Dispensary patients receiving home care, 249; district cases reported by health physicians, 40; charity cases reported by other physicians, 806; moderate income patients, 983; metropolitan patients, 372; old cases still under treatment, 660; total number of cases under nursing care during year, 3,110. Classification of diseases for the new cases: Medical, 396; surgical, 80; gynecological, 49; obstetrical under professional care, mothers 569, infants 557; eye and ear, 27; skin, 10; throat and nose, 16; dental, 0; infectious diseases in the medical list, 746; surgical list, 0. Disposition: Removed to hospitals, 250; deaths, 319; discharged cured, 1,305; improved, 656; unimproved, 40; number of patients still remaining under care, 540.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 6; students in attendance, 26; nurses in attendance, 8; patients carried over from last year, 1; new patients during year, 76; patients discharged, 75; visits by head obstetrician, 5; by attending obstetrician, 221; by students, 442; by nurses, 741; total number of visits for this department, 1,409.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 18,465; for professional supervision of convalescents, 7,813; total number of visits, 26,278; cases reported to the Guild by 6 health physicians, and 133 other physicians; graduate nurses 8, certified nurses 2, pupils nurses 7 on duty.

Dispensary Report.—Number of clinics held, 1,338; new patients, 2,726; old patients, 4,950; total number of patients treated during year, 7,676. Classification of clinics held: Surgical, 231; nose and throat, 41; eye and ear, 314; skin and genito-urinary, 116; medical, 177; lung, 115; dental, 0; nervous, 43; stomach, 41; children, 163; gynecological, 97.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR JANUARY, 1916.—Number of new cases, 199; classified as follows: Dispensary patients receiving home care, 10; district cases reported by health physicians, 1; charity cases reported by other physicians, 60; moderate income patients, 87; metropolitan patients, 41; old cases still under treatment, 540; total number of cases under nursing care during month, 739. Classification of diseases for the new cases: Medical, 27; surgical, 5; gynecological, 3; obstetrical under professional care, mothers 40, infants 40; eye and ear, 2; skin, 2; throat and nose, 2; dental, 0; infectious diseases in the medical list, 77; surgical list, 1. Disposition: Removed to hospitals, 16; deaths, 22; discharged cured, 103; improved, 95; unimproved, 2; number of patients still remaining under care, 501.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 3; nurses in attendance, 3; patients carried over from last month, 1; new patients during month, 7; patients discharged, 3; visits by head obstetrician, 0; by attending obstetrician, 26; by students, 26; by nurses, 41; total number of visits for this department, 93.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,340; for professional supervision of convalescents, 791; total number of visits, 2,111; pay patients, 865; charity patients, 455; unrecorded, 791; cases reported to the Guild by 2 health physicians, and 54 other physicians; graduate nurses 7, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 91; new patients, 170; old patients, 470; total number of patients treated during month, 640. Classification of clinics held: Surgical, 13; nose and throat, 9; eye and ear, 15; skin and genito-urinary, 8; medical, 13; lung, 7; dental, 0; nervous, 3; stomach, 3; children, 11; gynecological, 9.

Public Health Course at the College.—February 9: Theodore Horton, C. E., director of division of sanitary engineering, New York State Department of Health. Subject, "Garbage Disposal."

February 16: Michael J. McDonough, Major, U. S. army corps of engineers. Subject, "Military Sanitation."

February 23: Linsly R. Williams, M. D., deputy commissioner, New York State Department of Health. Subject, "Milk and Its Relation to Public Health."

Held in the State Education Building, Wednesdays at five o'clock.

Albany Hospital Notes.—A clinical meeting was held in the amphitheatre of the Albany Hospital Tuesday evening, February 8. The subject of the evening was "Pneumonia." A series of cases were presented by Drs. Dickinson, Early, Heslin, Lyons and Tomlinson. The cases represented pneumonia as it affects various portions of the lung and certain of its commoner complications. Dr. Howard demonstrated a series of X-ray plates of the above cases taken at different stages of the disease. These illustrated in most striking manner the normal process of resolution as well as delayed resolution, empyema and pyopneumothorax. Dr. Wadsworth, director of the division of laboratories of the New York State Department of Health spoke about certain of the more recent theories of infection and immunity in pneumonia, and his research assistants, Miss Kirkbride and Miss Cooper, demonstrated the technique for differentiation of different types of pneumococci. Dr. J. M. Mosher presided and spoke of mental states in pneumonia.

Medical Society of the County of Albany.—The regular monthly meeting of the Medical Society of the County of Albany was held at the Elk's Club, Albany, Friday, February 18, 1916, at 8.45 p. m.

Dr. Arthur F. Holding of New York City read a paper on "The Ameliorating Action of Roentgen Rays, Radium and Coagulation on Malignant Tumors."

Medical Society of the County of Schenectady.—The regular meeting of the Medical Society of the County of Schenectady was held in the rooms of the New County Building, Tuesday, February 8, 1916, at 8.30 p. m.

Scientific program: "Systemic Infections through the Oval Cavity," Dr. John H. Collins; "The Relation of the Spleen to the Different Types of the Anaemia," Dr. John D. Gulick; "The Indication for Blood Transfusion," Dr. Arthur Krida.

SARATOGA SPRINGS MEDICAL SOCIETY.—The regular meeting of the Saratoga Springs Medical Society was held in the Business Men's Rooms, Friday, January 28th, 1916, at 9 P. M.

The following papers were read: "Nasal Accessory, sinuses, with special reference to frontal," Dr. T. J. Goodfellow; "Electro-cardiograph," Dr. Carl P. Comstock.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.—The fifty-second annual meeting of the American Ophthalmological Society will be held at the Shoreham Hotel, Washington, D. C., May 9th and 10th, 1916.

LECTURES ON INSANITY.—The mental hygiene committee of the State Charities Aid Association announces that, in the interest of a State-wide campaign of education for the prevention of insanity, plans have been made for public lectures. Certain specialists in mental diseases have been appointed to deliver such lectures. Among these are: Drs. Stewart Patton, Smith Ely Jelliffe, August Hoch, Thomas Henry Williams, Manas S. Gregory, Charles S. Little, Thiells, William Mabon, James V. May, Albany; Herman G. Matzinger, Buffalo, and others interested in social and educational work.

GOVERNOR WHITMAN URGES QUARANTINE TRANSFER.—Governor Whitman has sent a letter to President Wilson requesting the immediate assignment of a federal officer to the post of quarantine physician, made vacant by the recent death of Dr. Joseph J. O'Connell. It is further reported that President Wilson has directed Surgeon-General Rupert Blue to take over the station at New York and has designated Assistant Surgeon-General Leland E. Cofer to take charge. The price to be paid to New York State by the federal government will have to be decided by a conference of representatives of the national and State governments.

STATE DEATH RATE LOW.—The summary of returns for births and deaths for the State for 1915 computed on the new estimate of population furnished by the director of the United States Census Bureau shows that the deaths numbered 145,552, giving a rate of 15 per 1,000 population, the lowest rate in the history of the State. The rate for the State outside of New York City was 14.9 as compared with 15.2 for 1914 and 15.8 for 1913. For the first time in many years the death rate outside of New York City is lower than that of the city. The report states that the promise of the State Commissioner of Health that with proper support he would save 25,000 lives in New York State outside of New York City in five years seems in a fair way of realization.

New York State Department of Health.—The February bulletin of the New York State Department of Health is devoted to the consideration of pneumonia in its various stages.

Lack of Physicians Raises Mortality.—A complaint is being made that a large district in France is entirely without physicians due to the exigencies of war. In the neighborhood of Lyons the sick of fourteen towns and villages are under the care of one old practitioner who retired fifteen years ago. Formerly this district had five physicians, but all of them are now in the field. In other districts the same condition obtains and the result is to be an alarming increase in mortality, especially among children.

Conference of Charities and Correction.—The Fourth Capital District Conference of Charities and Correction will be held at the Ten Eyck Hotel, Albany, N. Y., March, 1916.

State Hospitals for the Insane.—Recent reports show very great overcrowding in all of the State hospitals. Appropriations are asked from the Legislature to make added provisions for the ever-increasing number of insane.

Prevention of Malaria.—The prevention of the dissemination of malaria and other diseases among the several States is the nominal bases of a bill that was introduced into Congress on January 4th to establish a drainage fund of $10,000,000 for the construction of drainage works to reclaim wet, overflowed and swamp lands. The reclaimed lands are to be made available for agricultural purposes and the administration of the proposed law is vested in the secretary of agriculture. By this measure the prevention of malaria is to be materially advanced.

National Leprosarium.—The desirability of a national leprosarium is recognized in a bill now pending in Congress. The surgeon-general of the army, the surgeon-general of the navy and the surgeon-general of the public health service are constituted a board to report on the selection of a suitable site. For erection and maintenance $500,000 is provided. The establishment is to be administered by the surgeon-general of the public health service whom it authorizes to receive into the leprosarium any leper who presents himself for admission or who may be apprehended or detained under authority of the United States quarantine laws. He may also upon application of the authorities of any State or of the District of Columbia, send for any leper and place him in the leprosarium for treatment.

Railway Accidents in 1915.—According to Accident Bulletin 56 of the Interstate Commerce Commission there was during the year to June 30, 1915, a total of 170,661 casualities on steam railways of the

United States. Of this number 8,621 represent persons killed and 162,040 the number injured. This is a decrease over the figures of 1914 of 1,681 in the number of persons killed and 30,622 in the number injured. The number of employees killed was 343 and the number injured was 99,192 in "industrial accidents" which are defined as accidents not connected with train operation but occurring to railroad employees other than trainmen on railway premises. Of the total number of persons killed 2,152 were employees, 222 passengers and 6,247 other persons including both trespassers and non-trespassers; thus there was a decrease over the figures of 1914 of 1,107 employees killed, 43 passengers and 531 other persons. Of the persons injured 138,092 were employees, 12,110 passengers and 11,838 other persons. There is a decrease in the figures of 1914 of 27,120 injuries to employees, 3,011 to passengers and 491 to other persons.

MILITARY MEDICINE.—Harvard University is about to establish in its graduate medical school a course in military medicine which will be under the charge of Major Weston P. Chamberlain, medical corps, United States Army.

PROGRESS IN COLD STORAGE INSPECTION.—Among the activities of the State Department of Health is that of issuing licenses to cold storage and refrigerating warehouses and of making regular inspection of the various warehouses. The number of warehouses inspected during the fiscal year ending September 30, 1914, was 6,196 and during the last fiscal year 9,174. During 1914, 95 actions were instituted and $2,025 in fines imposed; during the past fiscal year 256 actions were instituted and $4,460 in fines imposed.

HEALTH INSURANCE.—A bill has been introduced into the State Legislature providing for compulsory health insurance for workers of the State which aims to supplement the present workmen's compensation law by giving medical attention and cash benefit to workers disabled by sickness as well as accident. The plan provides that 40 per cent of the cost of health insurance is to be borne by the workmen themselves, 20 per cent by the State and 40 per cent by the employers. The bill has been drafted by the American Association for Labor Legislation and will cover any case of sickness or accident not within the scope of present legislation. It applies to manual laborers and all others earning less than $100 a month.

AMERICAN JOURNAL OF ORTHOPEDIC SURGERY.—The American Orthopedic Association announces the appointment of Dr. Mark H. Rogers, Boston, as editor of *The American Journal of Orthopedic Surgery*, the only periodical in the English language devoted to orthopedics. This journal, which has now completed 13 volumes as a quarterly publication, will henceforth be issued monthly, the first number in the new form being that of January, 1916.

The office of publication has been transferred from Philadelphia to Ernest Gregory, 126 Massachusetts avenue, Boston. The subscription price is $4 per year.

Diabetic Foods Defined.—U. S. Department of Agriculture Issues Decision on Gluten Products and Diabetic Food.—Food inspection decision No. 160, recently issued by the U. S. Department of Agriculture, for the guidance of officials of the department in enforcing the food and drugs act, fixes a definite limit to the amount of starch and sugar that may be present in certain gluten products and diabetic foods, and also fixes the amount of nitrogen that must be present in certain of these products, and makes requirements as to moisture and other constituents. The decision covers ground gluten, gluten flour, self-rising gluten flour, and "diabetic" foods. The definitions and standards as stated in the food inspection decision were recommended by the joint committee on definitions and standards, consisting of representatives of the U. S. Department of Agriculture, the Association of American Dairy, Food, and Drug Officials, and the Association of Official Agricultural Chemists. These two associations have already adopted the definitions and standards.

Investigations by the officials in charge of the enforcement of the food and drugs act have shown that various food products have been placed on the market from time to time that are recommended by the manufacturers for use by people suffering from diabetes. It is generally held that the foods best suited to persons suffering from diabetes are those which contain little or no starch and sugar. Some of the foods placed on the market and recommended by the manufacturers for use in diabetes have been found to contain nearly as much starch and sugar as ordinary products, so that they were of no more value in the treatment of diabetes than ordinary food products that could be purchased more cheaply. The diabetic patient can avoid ordinary food products that contain considerable quantities of starch and sugar, as the composition of these products are generally known. In the case of prepared foods advertised for use in diabetes, however, the patient may be misled into eating quantities of starch and sugar that might be positively injurious.

Hereafter such products should meet the requirements of food inspection decision No. 160, which are as follows:

Ground gluten is the clean, sound product made from wheat flour by the almost complete removal of starch and contains not more than ten per cent of moisture, and, calculated on the water-free basis, not less than fourteen and two-tenths per cent of nitrogen, not more than fifteen per cent of nitrogen-free extract (using the protein factor 5.7), and not more than five and five-tenths per cent of starch (as determined by the diastase method).

Gluten flour is the clean, sound product made from wheat flour by the removal of a large part of the starch and contains not more than ten per cent of moisture, and, calculated on the water-free basis, not less than seven and one-tenth of nitrogen, not more than fifty-six per cent of nitrogen-free extract (using the protein factor 5.7), and not more than forty-four per cent of starch (as determined by the diastase method).

Gluten flour, self-raising, is a gluten flour containing not more than ten per cent of moisture, and leavening agents with or without salt.

"Diabetic" food. Although most foods may be suitable under certain conditions for the use of persons suffering from diabetes, the term "diabetic" as applied to food indicates a considerable lessening of the carbohydrates found in ordinary products of the same class, and this belief is fostered by many manufacturers on their labels and in their advertising literature.

A "diabetic" food contains not more than half as much glycogenic carbohydrates as the normal food of the same class. Any statement on the label which gives the impression that any single food in unlimited quantity is suitable for the diabetic patient is false and misleading.

The foregoing definitions and standards are adopted as a guide for the officials of this department in enforcing the food and drugs act.

TYPHOID FEVER REDUCED IN RURAL COMMUNITIES.—Reduction in typhoid fever and improvement in sanitary conditions have followed the intensive investigations of rural communities carried on by the United States public health service in co-operation with local and State health officers, according to the annual report of the surgeon-general of that service. During the past fiscal year 16,369 rural homes in eight different States were visited and many of them re-visited. In each of these homes information was obtained as to the prevalence of disease and insanitary conditions and a complete sanitary survey of the premises conducted. This was followed by reinspections to determine if remedial measures had been instituted. In but a relatively small percentage of the cases did the persons concerned, after having their attention drawn to the danger of a particular unhygienic condition, fail to inaugurate corrective measures. Stimulus was given to the work by means of public lectures, the formation of active sanitary organizations, and the enlisting of all public spirited citizens in the campaigns for reform. Public buildings were also inspected and local authorities given expert advice in solving such sanitary problems as the disposal of excreta, the prevention of soil pollution, and the maintenance of pure water supplies.

The surveys made during the year 1914 had shown that in rural communities less than one per cent of the homes had sanitary toilets and that more than fifty per cent of the people were using water from polluted sources. This condition, according to the public health service, made the rural sanitation question loom large among the matters vitally affecting the welfare of the nation. Following these studies and as a result of the interest aroused, the typhoid fever rate, an excellent indicator of the sanitary status of a community, has in some places frequently been cut to one quarter of its previous figure. In Berkeley county, West Virginia, the cases of typhoid fever were reduced from 249 to 40 in one year. In Orange county, North Carolina, the rural sanitation campaign resulted in a reduction of the cases from 59 to 17.

The tangible results of operations in rural sanitation indicate that marked advancement in maintaining hygienic and satisfactory surroundings in country districts is possible by the application of the common principles of preventive medicine. Insanitary conditions exist largely because they are not known to be such. Actual demonstrations of their harmfulness, together with definite recommendations for their correction, remain one of the most gratifying and successful methods for instituting reforms and has been, in the experience of the public health service, invariably accompanied by definite and measurable results.

PERSONALS.—Dr. CHARLES A. PRESCOTT (A. M. C. '06), has removed from Canajoharie to Croton-on-Hudson, N. Y.

—Dr. JEROME MEYERS (A. M. C. '07), has removed from 206 State street, Albany, to 600 West One Hundred and Forty-second street, New York City.

MARRIED.—Dr. DAVID BEARD (A. M. C. '14), Cobleskill, N. Y., and Miss Nellie E. Snyder, were married December 25th, 1915.

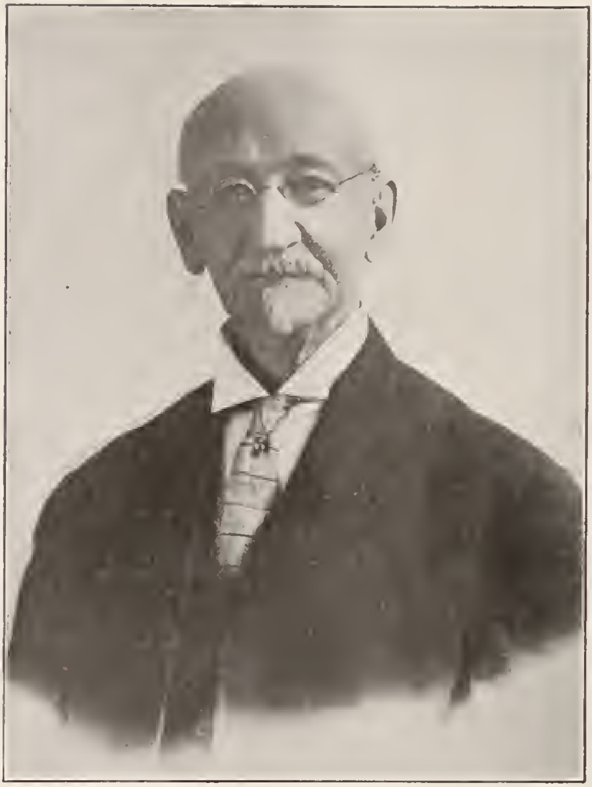
—Dr. RAYMOND SCHILLING (A. M. C. '15), Chatham, and Miss Bessie E. Smith, of Albany, N. Y., were married in Albany, February 5th, 1916.

DIED.—Dr. CHARLES B. FRY (A. M. C. '61), died at Mattoon, Illinois, March 2, 1915.

—Dr. GUY HOLBROOK (A. M. C. '66), formerly a member of the Massachusetts and New Hampshire medical societies, died at his home in Boston, Mass., January 1, 1916, aged 70.

In Memoriam

CHARLES B. FRY, M. D.



CHARLES B. FRY, M. D.

Albany Medical Annals
March, 1916

In Memoriam

CHARLES B. FRY, M. D.

Dr. CHARLES B. FRY, an honored alumnus of the Albany Medical College of the class of 1861, died March 2, 1915, at his home in Mattoon, Ill., after a long and active life of service, to his country and to the demands of his profession.

Dr. Fry was born in Albany, N. Y., January 24, 1841, and graduated from the Albany Medical College, a short time before attaining his twenty-first year. He immediately applied for and received a commission as assistant surgeon in the 21st New York Volunteers, and started for the front. On reaching Washington he was detailed for duty in a hospital there, and remained about six months. He then joined his regiment in the field, and remained with it until it was mustered out. He was present in at least two battles. He then took service as surgeon-in-charge of the flag of truce steamer *New York*, engaged in exchanging prisoners, and later became chief surgeon in a fleet of steamers in the same service. He was among the first to enter Richmond at the close of the war, and he received a vote of thanks from Congress for his services. He then engaged in the timber business in Virginia, and was elected president of William and Mary College. He also engaged in active medical practice in Richmond, but the awful condition of many of the exchanged prisoners received on his vessels during the war had so affected him that he relinquished the practice of his profession and went to St. Louis. He remained in St. Louis two or three years, and from there removed to Mattoon, Ill., resumed practice, and continued in active medical work until five or six years before his death. He was especially considerate of the poor, and although not a married man it is said of him that his accounts at the stores for provisions were much larger than those of people who had families to support on account of his extreme ideas of charity. When he retired from practice he removed to Ocean Springs, Miss., and although he did not intend to settle permanently there he took steps to qualify for a license. In this connection the letters of commendation he received revealed the esteem in which he was held by his associates and friends in Illinois. From these letters the following phrases speak most definitely of Dr. Fry's ability and character:

From the chief surgeon of the Illinois Central Railroad Company, the following commendation was given:

"I don't know a more reliable practitioner of medicine and surgeon, than Dr. Fry. He was our district surgeon at Mattoon, Illinois, between twenty and twenty-five years, and served in that capacity with great satisfaction to our employees and to the company. He was really, I might say, the first citizen of Mattoon. He always stood for what was best in life and in practice. I consider Dr. Fry a desirable acquisition in any town where he may go, both socially and professionally."

The president of the State Medical Society commented upon Dr. Fry in the following eulogistic terms:

"Dr. Fry stands so high in the profession of our State, both as a physician and a gentleman, that it seems rather strange to us who know him well, that he should even have to go through the form of applying to practice anywhere on earth. However, I can state that he is considered one of the most able, upright, conscientious, scientific. physicians and surgeons in our entire State. He will be a credit to your medical profession, and a valuable citizen of the State."

The president of the Mattoon National Bank stated:

"I have known Dr. Fry as a practicing physician and surgeon for thirty years. He has practiced in my family and my knowledge of him is intimate. He is a man of excellent character and unimpeachable integrity. As a man, a citizen and physician and surgeon, no man stood higher here or in this section of Illinois, than Dr. Fry.

"It gives me pleasure to say these things of him, and I cannot make my commendation too strong."

From the relief department of the C. C. C. and St. Louis Railway company the esteem of Dr. Fry was expressed as follows:

"Dr. Fry was our division surgeon, St. Louis division, stationed at Mattoon, Illinois, for a great number of years, and my personal acquaintance with him began in 1893, and has been intimate ever since. He resigned from the service of his own accord. I can truthfully say that Dr. Fry is a gentleman in every meaning of the word, honest, conscientious, and thoroughly reliable in every respect. Anything you may do for him will certainly be appreciated by his friends."

A professional friend wrote as follows:

"Some time ago my old friend, Dr. C. B. Fry, told me he thought of applying to your body for a license to practice medicine at Ocean Springs, but that he dreaded the ordeal of an examination, feeling, like most of us who have been in practice for twenty years or more, that he had forgotten much of the technical matter which you might, at your discretion, require of him. Knowing Dr. Fry's ability as I do, I have no doubt whatever that you will grant him a license, for the most cursory inquiry will show you that while he may have forgotten some things, he has acquired others of relatively greater importance to a practising physician.

"I have known Dr. Fry intimately for thirty-five years and during all of that time he has been every thing a good doctor should be and none of the things any doctor should not be. He has been president of the Aesculapian Society of the Wabash Valley. vice-president of the Illinois State Society and for twenty years or more prior to leaving Mattoon was district surgeon for the Illinois Central R. R. Co. and for the C. C. C. & St. L. R. R. Co., besides having a very large private practice.

"He held many offices of trust and honor including that of mayor of Mattoon, Ill. for two terms.

"Dr. Fry can stand any sort of practical examination you may care to give him and is as well up in technical medicine as any man I know of his age who is not a teacher. I commend him to your good graces."

Dr. Fry was a Mason and a Knight of Pythias and a comrade of the Grand Army of the Republic. All in all his life speaks for a high degree of honor and industry, in which his fellow alumni of the Albany Medical College may well take high pride.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

NEW YORK STATE MEDICAL LIBRARY.

Edited by Miss Frances K. Ray.

Recent Accessions.

American pediatric society. Transactions, v. 27, 1915.
American urological association. Transactions, v. 9, 1915.
Aviles, A. V. Pathologia clinica. 1915.
Beiträge zur Klinik der Tuberkulose, v. 33, 1915.
Bradford & Lovett. Orthopedic surgery. 5th ed. 1915.
Braun & Seifert. Tierischen Parasiten des Menschen. 1915.
Eppinger & Hess. Vagatonia, a clinical study in vegetative neurology. 1915. (Nervous and mental disease monograph series, no. 20.)
Hare, H A. Practice of medicine. 3d ed. 1915.
International clinics, ser. 25, v. 4, 1915.
Meyer & Gottlieb. Pharmacology, clinical and experimental; transl. by Halsey. 1915.
Peabody, Draper & Dochez. Clinical study of acute poliomyelitis. 1912. (Rockefeller institute for medical research. Monograph no. 4.)
Sahli, H. Lehrbuch der klinischen Untersuchungs-Methoden, v. l, 1913.
Sonnenburg und Tschmarke. Die Verbrennungen und die Erfrierungen. 1915. (Neue deutsche Chirurgie v. 17.)
Stecher, W. A., *ed.* Gymnastics; a text-book of the German-American system. 1896.
Türk, Wilhelm. Vorlesungen über klinische Hämatologie. Teil 1-2. 1912.
Wells, H. S. Chemical pathology. 2d ed. 1914.

New Current Subscriptions.

Journal of parasitology.
Neurologisches Centralblatt.
U. S. steel corporation. Bureau of safety, sanitation and welfare. Bulletin.

A printed list of *complete* sets of medical serials has recently been issued and distributed to nearly 2,000 physicians of the State. Any interested physician not having received one may obtain a copy upon request to the library. The following periodicals have been completed since the printing of the list, and are being currently received:

American journal of physiology.
British journal of children's diseases.
Jahresbericht über die Fortschritte auf dem Gebiete der Chirurgie.
New York pathological society. Transactions.

PATHOLOGY AND BACTERIOLOGY.

Edited by Ellis Kellert, M. D.

The Pathological Effects of Atmospheres Rich in Oxygen.

HOWARD T. KARSNER. *Journal of Experimental Medicine, February* 1, 1916, p. 149.

Karsner was led into the investigation by the increasing use of oxygen in the industries and in therapeutics. Rabbits were placed in a small respiration apparatus devised by Benedict. Carrots and water were supplied. Previous to entering the chamber each animal underwent a thorough examination of the urine and blood and the rabbits showing albuminuria were excluded. It was found that animals exposed to atmospheres containing eighty to ninety-six per cent of oxygen developed in twenty-four hours a fibrinous broncho-pneumonia. No pathologic changes were found in the blood, spleen, lymph nodes, or bone-marrow except congestion which was probably due to the dilatation of the heart.

Further Investigations on the Origin of Tumors in Mice. III. On the Part Played by Internal Secretion in the Spontaneous Development of Tumors.

A. E. C. LATHROP and LEO LOEB. *The Journal of Cancer Research, January,* 1916, p. 1.

In a previous communication, Loeb showed it possible to produce "deciduomata" or "placentomata" through the action of the internal secretion of the corpus luteum and of mechanical factors. These tumor-like structures were transitory in character and tended to become necrotic. They suggested the possible significance of internal secretions in the origin of cancer.

The present problem was investigated (a) by castrating mice and (b) by the prevention of breeding. Mice under the age of six months when castrated, showed a marked decrease in the cancer incidence. No effect was observed in the castration of mice above the age of six months. A decrease in the cancer incidence was noted in mice prevented from breeding.

It would appear that removal of the ovaries inhibits tumor growth of the mammary gland by allowing it to remain in an uninterrupted state of rest. Extirpation of the ovaries after the breeding period has passed is without effect.

VOL. XXXVII APRIL, 1916 No. 4

ALBANY MEDICAL ANNALS

Original Communications

THE MECHANISM OF A DREAM.

Read before the Scientific Association of Canandaigua, February 17, 1916.

BY JOHN BASSETT CHAPIN, M. D., LL. D.,

Formerly Resident Physician, Brigham Hall Hospital, Canandaigua; Medical Superintendent Willard State Hospital, Willard; and Physican-in-chief, Pennsylvania Hospital for the Insane, Philadelphia.

A dream is defined as " a train of thought or an image passing through the mind in sleep." The limitations and acceptance of this definition will exclude those mental states classed as fantasies, phantoms, reveries, ecstatic conditions, which occur during waking hours; also the trance state, illusions of the senses induced by drugs or intoxicants, and the disordered delusional mental states of the insane. Dreams may be said to be a common and universal experience, although there is a record by name of two persons who are said to have been exempt, yet it is probable or even possible *they* were such sound sleepers the dreams, if any were framed, were not remembered or recalled.

The Old Testament scriptures make 120 allusions to dreams and dreamers. Dreams at an early period were often regarded as the harbingers of coming events. They were accepted as a direct message from God. The soothsayer was sought to interpret their true meaning. The interpretation was sometimes the cause of wars and affected and changed the course of nations and individuals.

In the New Testament scriptures there are few references to dreams, if we except the revelations of holy and inspired men.

Whether the translators of the sacred scriptures used the words " dreams and dreamers " in the sense and with the limitations of modern usage does not appear, but they often assigned to them a higher than human significance and may have ascribed to God the power of causing "His ministering spirits to communicate to man His purposes through these means."

The dreams of scripture, those thoughts from the visions of the night, when deep sleep came upon men, were associated with the mission of an angel, or immediate communion with the Deity, for He has said that He would "speak to His prophets in a dream," an instance of which is the fulfillment of the *Annunciation*. Again, it is said: "The voice of God came in a dream;" "The angel of God came in a dream." These are recorded as instances of the direct transmission of the Divine Will.

Shakespeare makes 249 references to dreams and dreamers, and from his resourceful insight of human feelings and actions, tells us of the stuff that dreams are made of, as well as other things.

The state of sleep or repose—the opposite of the wakeful state—seems to be a provision for the restoration or recuperation of exhausted energy in the animal and vegetable kingdoms. In the human species during sleep there is a suspension of the faculty of volition while other functions not under control of the will are performed, as respiration, the heart, and other vital functions. During waking hours our thoughts and actions move along in channels controlled by the will, and their frequent repetition form what we call "habit." The will dominates the course and current of our ideas. By its supreme power the will—the faculty of attention—is applied to any subject that may present and enables us to form conclusions or judgments which the will may put in execution.

It has been said: "All men while awake are in one common world, but that each when asleep is in a world of his own."

On the other hand, who has not experienced or witnessed the weariness and exhaustion from sleeplessness in sickness or misfortune, when the hours pass slowly and the sad experiences of life pass in review and wretched thoughts have control. History informs us that Caligula, a Roman emperor, suffered and died from sleeplessness and remorse at the recollection of his cruelties. When a school class was asked by the teacher to write upon a slate what they could say of Caligula, one member wrote "the less said of Caligula the better."

There is a certain mental preparation for sleep by an attempt to dispel all worry about the thoughts of the day that have seriously engaged the mind. The eyes are closed lest surrounding objects should by association excite new trains of thought. Those recognized principles that have been styled "laws of association" in accordance with which certain ideas or thoughts are connected together, or as a result of habit, are recalled for review. Monotonous sounds and motions—the croning of a nursery song, the breaking of waves and surf upon the shore—still and soothe the troubled mind and conduce to quiet and sleep. In the dream state the laws of association are still operative, in accordance with which one thought is followed and suggested by another, and as the sight of former places and occurrences bring back to us former reminiscences, or as visits to places familiar to early years restore to our memory the well-known persons and incidents of early years, are not wholly in abeyance, but in their temporary suspension, the most incongruous conclusions are sometimes formed, even from the dissociate thoughts that ramble through the mind. In the absence or suspension of the will or volition it is not probable that any continuous process of reasoning can be carried on. The rapid operation of the mind is illustrated in a measure by dreams. "A gentleman dreamed that he had enlisted as a soldier and that he deserted was tried by a court martial, and condemned to be shot, and was led out for execution. The guns of the platoon were fired, at which he awoke. A heavy fall in an adjoining room making a loud noise had both produced the entire dream and awakened the dreamer in such a brief period of time as could hardly be estimated."

While it is possible to conceive that God might communicate through his ministering spirits messages to man, yet at one period a prevalent conviction existed that it did occur and that dreams had an important significance in the nature of prophecy. The Romans worshipped Brizo, the goddess of dreams. On any important expedition the Greeks and Romans placed great confidence in the manifestation of dreams, and the Jews went through certain ceremonies which they called the "benefaction of a dream." The dream often foreboded some calamity about to happen. Probably, this was mainly due to a suspension of judgment, or fears overshadowed deliberation and knowledge.

Important and critical battles were fought in locations which dreams are said to have indicated where victory would be won. Two imposters, Mohammed and his imitator, Brigham Young, ascribed their revelations to dreams, and thousands of their deluded followers are living at the present day.

Prophecies have come to persons in dreams of sudden death by violence and other means, which have been realized. The stopping of a clock has to some marked the hour that a death of some near friend had occurred, and the news is awaited with anxiety. Many of such events are susceptible of psychological analysis and explanation. On the other hand, there are many more prophetic dreams that are never fulfilled and treated as of no consequence except by the superstitious. When they do occur, they are instances of remarkable coincidences rather than the fulfillment of prophecies.

In my professional experience and relations, a request was made to examine an employee of the United States mint, who was indicted, charged with a dishonest act in appropriating bullion to his personal use. The United States attorney had reason to expect that an insanity defence would be offered, and desired that he should be examined as to his mental condition. The prisoner willingly submitted and stated in explanation of his crime that an officer of the New York office, performing duties similar to the duty he performed in the Philadelphia office, received a larger compensation than he was paid. He had endeavored to ascertain by prayer what he might do to equalize his salary. He declared it was revealed to him, in answer to prayer, to appropriate any public money within his control or reach, which he had done. He said the voice was not human, but from a higher than human source. The voice was similar in tone and expression to the human voice. It was audible and clear. When I asked him whether he had not mistaken what he called the voice of God, and that it might have come from the devil, he replied that "he had not thought of that." He was duly convicted. It is doubtless true that intense and prolonged thought upon a given subject is carried into the realms of dreams and brings about some foundation for acts during the waking state that ensues.

The so-called realm of dreams is too vast to explore during a session of this association. Much indeed that may be stated is wholly speculative and may not be susceptible of demonstration. The phenomena of somnambulism—sometimes called "sleep walking"—may be described, but the condition may be understood as one of unconsciousness with the power of moving. Ordinarily, the power of walking in obedience to dreams does not exist, but in "sleep walking," or somnambulism, it does still exist. "Sleep walking" in a semi-conscious state may extend over a considerable period of time. A clergyman of Massachusetts disappeared and all efforts to trace him failed. Several weeks after his mysterious disappearance he was recognized by a friend who found him selling penny newspapers in Norristown, near Philadelphia. He was unable to furnish an account of his wanderings and his new vocation.

A medical student disappeared from Philadelphia and several weeks afterwards was found in New York in a semi-conscious condition with dirty clothes in rags, unable to account for his movements or furnish any motive for his wandering. Both of these seemed to be in a dream state with the power of moving in accordance with the ideas or suggestions of the dream. Both were typical cases of somnambulism or sleep walking. So in the cases of talking aloud in sleep the ideas of the person are passing through the mind and the power of expressing them aloud from habit is not suspended.

In the further analysis of the subject of dream making, we must bear in mind the functions of our several senses, by means of which the mind has received sensations. The sensations have been received during life and remain stored in the brain. By analogy they are like the stored films of the photographer until recalled in some orderly association of ideas. They must prove to be intensely interesting, for in many dreams there are vivid pictures of the past and we seem to hear even the voices of dear friends who have passed beyond. These images or impressions often linger until far into the waking state. On the other hand, dissociated ideas of a dreadful character having no relation to each other by association pass through the mind in succession in the dream state. They are incongruous. Volition is suspended or does not act. Whoever has observed the insane in acute forms of insanity or in states of delirium can have some comprehension of the dream state. In some forms of mental disorder the will retains control over bodily movements, but its control over currents of thought is in a state of suspense. Ideas flow with such rapidity they cannot be or are not directed or controlled. They are accentuated in loud tones as if propelled by some physical force, while the power of the will is undiminished. Delusive ideas are also suggested in the dream state, as in the case of an invalid, who was prescribed a mustard poultice to be applied to the feet and as it warmed the extremities he had the hallucination he was walking upon the hot lava of Vesuvius. Another person who had a blister applied to the head had a dream that he was being scalped by Indians.

There is a case recorded of a young lady who was sleeping in a bed by the side of her mother, showing exceptionally that volition is not always suspended during the dream state. The mother noticed her daughter's fingers were playing over her head. In a few moments the daughter arose and went to a piano and executed a difficult piece of music, which she had been unable to execute during the waking moments. The case illustrates an exception to the general rule that volition is in a state of suspense during sleep.

The origin of dreams can often be traced in a psycho-analysis to association of ideas. The impressions of earlier years remain with us longer and account for the frequency of dreams connected with that period of life, many of which are not remembered or recalled in waking moments. Dreams are influenced by temperaments. The child is ushered into the world with a brain which has not possessed conscious intelligence, but is capable of receiving impressions through the senses. These impressions are "stored up" in the brain as "memories," and probably remain throughout life. There is a certain individuality in the way the impressions are received, so that the influence they produce differs in different persons and thus different characters and temperaments respond in different ways, else all people would be alike. The environment of different races may be understood to produce different effects, and the reaction of the savage to the customs and habits of his race would differ from that of a civilized being; and the traditions of centuries would affect the manner of receiving impressions; and the state of cultivation or brain capacity would thus show the effect of heredity. The first knowledge gained is of the simplest and leads to the exercise of those functions which tend to the preservation of life. Later it becomes more complicated and volitional activities are developed. The primitive impressions are thus crowded into the background and from frequent use become automatic, and are performed without arousing the conscious attention of the individual. There thus develops what has been termed a " subconscious existence," which is constantly active though without arousing the attention. It has been described by William James as a constantly flowing " current " or " stream." At times, especially during fatigue or when conscious attention is in abeyance, this sub-conscious stream rises to the surface. It is in large measure associated with the primal instinct of self-preservation, and is thus closely allied to the feeling of fear. In sleep the attention may be momentarily attracted by this current of thought, which enters the realm of consciousness, and so has the effect of a dream.

To summarize briefly, it may be stated that from an early period of life the mind has been a receptacle and storehouse of innumerable sensations and impressions, upon which, during our waking hours, we are constantly making drafts, forming new combinations, and judgments. Inventions do not come in dreams. They are the result of newly formed combinations of principles. No one has ever invented anything in a dream, though in the early waking moments following the refreshment that comes from sleep some problems that have absorbed our attention are attacked with a clearer mental vision. During waking hours the current of our thoughts is directed by the will, but in sleep volition is in a state of suspense, the currents of thought being mainly controlled by the laws of association, which remain in a measure active, and are recognized or remembered as dreams.

I invoke the god of Morpheus to give you pleasant dreams.

DEMONSTRATION OF METHODS FOR PNEUMOCOCCUS DIFFERENTIATION

At a Meeting of the Staff of the Albany Hospital, February 8, 1916.

By MARY B. KIRKBRIDE,

Assistant Bacteriologist, State Department of Health, Albany, N. Y.

Dr. Wadsworth has spoken of the work of Dr. Cole and Dr. Dochez and their associates at the Rockefeller Hospital, and of their differentiation of pneumococci, by means of cultural tests and serological reactions, into four distinct types or groups.

Miss Cooper and I will demonstrate a part, at least, of the routine procedure for isolating and identifying these types from sputa sent in for diagnosis to the Albany Laboratory of the State Department of Health—the methods being practically the same as those in use at the Rockefeller Hospital.

Last summer immunization of horses with pneumococci belonging to Types I, II, and III was commenced at the State's farm at Voorheesville; first with dead cultures, then with increasing amounts of live organisms, until now the horses have reached a high degree of immunity.

The serum is tested at frequent intervals by agglutination reactions and by protection tests on mice. In recent tests .1 cubic centimeter of Type I immune serum protects a mouse against .1 cubic centimeter of Type I culture, one millionth of which kills a mouse unprotected by serum in twenty-five to thirty-five hours. Type II immune serum is somewhat less potent for Type II organisms, .2 cubic centimeters protecting against .01 cubic centimeter of culture, one millionth of which kills a mouse in twenty-five hours. Heterologous sera do not protect or protect to a much lesser degree.

At once on receipt at the laboratory of sputum for diagnosis from a pneumonia case, a gram and a capsule stain are made to show the presence and number of encapsuled diplococci in the specimen. A firmer part of the sputum is taken and after four or five washings in salt solution, it is ground with a little sterile broth in a mortar and about 0.5 cubic centimeters injected into the peritoneum of a mouse.

For a successful diagnosis it is important to have the sputum coughed up from as far down the trachea as possible, so that mouth flora may be avoided. The sputum should be injected into the mouse as soon as possible after collecting it. If the case is urgent an exploratory puncture is made within six to eight hours. Enough peritoneal exudate can be drawn up in a capillary pipette to make a smear. If microscopic examination shows many encapsulated, gram positive cocci, the mouse is choloroformed. If not urgent, the mouse is left as it will almost always be dead by the next morning. Smears usually show the peritoneal exudate packed with pneumococci. If contaminating organisms are not present, the peritoneum is carefully washed out with broth media. The bacterial suspension thus obtained is centrifugalized at low speed to throw down any debris that may be present. The supernatant fluid is then pipetted off and centrifugalized at high speed for fifteen to twenty minutes.

For the agglutination tests a rack with five tubes is used. Into these in order are pipetted .3 cubic centimeters of Type I serum, .3 cubic centimeters Type II serum, or .3 cubic centimeters normal horse serum, .1 cubic centimeter and .3 cubic centimeters of ox bile. Equal parts or .3 cubic centimeters of the pneumococcus, which has been thrown down by centrifuging and afterward suspended in salt solution is added to each of the serum tubes; .4 cubic centimeters to the first bile tube and equal parts or .3 cubic centimeters to the second. The tubes are then placed in the water bath at thirty-seven degree C. for two hours, readings being made at fifteen minutes, thirty minutes, and two hour intervals, then in the ice box over night. If the organisms belong to Type II agglutination may be seen practically at once; it is generally very distinct within fifteen minutes. The agglutination with Type I organisms and serum occurs usually within half an hour.

If no agglutination in seras I and II occurs within one or two hours but the bile clears, a provisional diagnosis may be made of Type IV, in which are included all pneumococci having independent immunity reactions and which are generally much less virulent for animals than the other types.

Going back to the mouse inoculated with the sputum,—if on opening the peritoneum a characteristic sticky exudate is found and smears show a gram positive diplococcus with a large capsule, a diagnosis of Type III or streptococcus mucosus can safely be made. To this Type belong approximately ten per cent of pneumonias. In these a high mortality is regularly found.

From the mouse's peritoneum and heart, streaks are made on an agar plate containing a little rabbit's blood and in addition a blood agar slant, a broth, and an inulin tube are inoculated from the heart's blood. The following morning agglutination tests are always repeated as controls with the broth culture if it is pure;—but if it is contaminated, fishings are made from the agar plate; then later, the agglutination tests. A second inulin is also made and a semi-solid serum agar tube inoculated, in which the strain may be preserved for two or three months without losing virulence.

The other organisms not infrequently isolated with the pneumococcus from specimens of sputum are the influenza bacillus and the Friedlander bacillus. The capsule stain, blood agar plates and bile and inulin tests differentiate the streptococci. In doubtful or special cases protection tests with the different immune sera may always be used as the final tests. Sets of mice are inoculated with .1 cubic centimeter of Type I serum and varying amounts of the unknown culture that is .1, .01, .001, .0001, .00001 or .000001 cubic centimeters; another set with .2 cubic centimeters Type II serum and varying amounts of culture. The mice injected with the homologous serum will remain perfectly well, the others will die in approximately the same time as the control mice which received culture only.

From the standpoint of prognosis alone the diagnosis of pneumococcus types may be of considerable importance to the practicing physician; for present statistics indicate that sixty to seventy per cent of all cases of lobar pneumonia are caused by Types I and II with a mortality of thirty per cent; ten to fifteen per cent to Type III with fifty to fifty-five per cent mortality, while in the remaining fifteen or twenty per cent of pneumonias are grouped the less virulent, independent strains giving a low mortality of perhaps two per cent. These statistics have been collected mainly from cases studied in New York City and Philadelphia; whether the distribution and percentages of types will differ at other places or in different years remains to be seen. The value and extent of our records will depend almost entirely on the interest and co-operation of the physicians, resident doctors and nurses in the area the health department is attempting to cover. Buffalo, Rochester, and Syracuse have already sent representatives here to learn the methods and are acting as centres for their districts while the Albany laboratory is prepared to cover Troy, Albany and the neighboring towns, and to make confirmatory diagnoses of all cases from the other centres so that the records may be accurate and complete.

The diagnostic methods described have, of course, as their ultimate purpose the successful treatment of patients suffering from lobar pneumonia. The results of treatment with homologous serum in cases caused by Type I have so far been very encouraging. The State laboratory has now produced a Type I serum having a high protective value experimentally and this has been prepared with great care for distribution. And here again the ultimate value would seem to rest very largely on the interest of those in any way connected with the therapeutic use of the serum,—for on this year's detailed clinical records of each case must largely depend the directions in which the department's pneumonia work will extend next winter.

THE INDICATIONS FOR BLOOD TRANSFUSION.

Read before the Schenectady County Medical Society, February 8, 1916.

By ARTHUR KRIDA, M. D.,
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The transfer of blood from the vessels of one individual into those of another has about it something that is spectacular, a something that makes rather a universal appeal to the imagination. Until very recently such an operation belonged to a very technical and painstaking branch of surgery, and a successful transfusion was heralded far and wide in the lay press. Even now, with the development of relatively simple transfusion procedures the press contains almost daily accounts of blood transfusions for all sorts of diseases and conditions from skull fractures to chronic nephritis. Unconsciously perhaps, we are leading the laity to believe that blood transfusion is a panacea. While its employment is not hedged about with as many dangers as is the indiscriminate use of tuberculin therapy, precautions are to be observed, ignorance or neglect of which may bring it into as great disrepute as tuberculin therapy has unjustly enjoyed, and from which it is only now recovering.

In view of this it may be well to take stock of our present knowledge of the subject. Two questions we may ask ourselves; first, what are we trying to accomplish when we transfuse blood into a patient; second, may we assure the patient that the procedure is at least free from danger.

In order to arrive at an intelligent answer to these questions, the physiology of the blood and circulation, and the incompletely understood pathologic physiology which obtains in the disease or condition for which transfusion is contemplated, must receive careful consideration. A discussion of the incompatibility of bloods will elucidate the second question.

I.

Let us then examine some of the properties and functions of this transplantable tissue, the blood.

1. It is a fluid holding in suspension the red and white corpuscles and blood platelets, and in solution numerous organic and inorganic compounds.

2. It is an unstable fluid by virtue of its property of coagulating when shed. The most accepted theory of this process is that of Howell, which may be briefly stated as follows: the factors present in the circulating blood are prothrombin, antithrombin, fibrinogen, calcium salts. When blood is shed there is elaborated by tissue, white blood cell and platelet destruction, a thromboplastic substance which neutralizes the antithrombin. This allows the union of prothrombin with calcium salts with the formation of thrombin, which in turn uniting with fibrinogen, forms fibrin. This is the essential constituent of the clot. The serum which exudes contains thrombin, calcium salts and thromboplastic substance, but no antithrombin or fibrinogen.

3. It is a fluid which keeps the circulation comfortably filled.

4. It serves as a distributor of nutriment to the tissues. The ultimate utilization of this nutriment is dependent upon an efficient interchange of oxygen and carbon dioxide. This is effected mainly by the hemoglobin contained in the red blood corpuscles.

5. It contains protein substances both cellular and unorganized, which are the organism's defences against infection. Also it contains antibodies which are peculiar to the species and subgroups of the species, besides hormones and ferments of unknown number and only partially understood activity.

To be logical in our application of blood transfusion, we must derive the indications for its application from a consideration of the conditions in which one or more of these functions is weakened to a remarkable degree. Adhering to this purpose, we might classify the conditions in which these indications exist according to their pathologic physiology somewhat as follows:

1. Conditions in which there is a deficiency in the quantity of the circulating fluid.

2. Conditions in which there is a deficiency of the respiratory elements sufficient in degree to impair the integrity of vital organs.

3. Conditions which are accompanied by disorders in the process of coagulation—increased susceptibility to hemorrhage.

4. Conditions in which the body has been invaded by infection and its products.

1 and 2. Deficiency of circulating fluid rarely occurs alone but is usually associated with deficiency of the respiratory elements. The classical example is massive hemorrhage. Here we find that the circulation is relatively depleted, the peripheral vessels are constricted, the respiratory function embarrassed by loss of hemoglobin. Blood transfusion is the ideal procedure, supplying at the same time fluid and hemoglobin, and it is in these cases that blood transfusion works an almost miraculous change in the patient's condition.

In acute hemorrhage of lesser degree, unless there is evident respiratory embarrassment, physiological considerations force upon us the conclusion that any other innocuous neutral isotonic fluid answers the purpose of filling the circulation as well as whole blood. It has been shown that under these circumstances, the cellular elements are regenerated in a few days, and that there is a marked tendency for the blood to replenish its fluid constituents immediately from the tissues. This is evidenced clinically by the thirst which these patients display and the greatly lessened urinary output. This conservative process may be effectually aided by the infusion of some neutral fluid like normal salt solution which is retained by the circulation until an equilibrium is established.

Any remarkable secondary anemia per se may be an indication for blood transfusion, no matter whether the anemia be secondary to some recognizable cause, as in ulcer, carcinoma, hemorrhoids, the hemorrhages of typhoid fever and dysentery, and ectopic pregnancy, or primary, as in pernicious anemia, chlorosis, leukemia, etc. The therapeutic indication of course is the removal of the cause of the anemia, but any operative or other procedure may be preceded by a blood transfusion to tide the patient over the operative procedure. Such patients are in much better condition to withstand an operation than are those operated on in a severely anemic condition.

In pernicious anemia, transfusion is regarded as a justifiable palliative measure in that it at least temporarily relieves the anemia, conserves the blood forming function of the bone marrow, and in about one-half the cases leads to a prolonged remission. It is possible that repeated transfusions from different donors will be accompanied by still more favorable results. A valuable adjuvant is splenectomy, as this removes one very important factor in the progressive blood destruction. Splenectomy has brought on a remission when blood transfusions have failed to do so, and it is the opinion of Ottenberg that it should be reserved for those cases in which blood transfusion fails. There is no authentic record of a cure in pernicious anemia.

In the small number of cases of myelogenous leukemia and acute lymphatic leukemia, blood transfusion has been without favorable result. In four of five cases of chronic lymphatic leukemia reported by Ottenberg and Libman, transfusion led to a remission in the course of the disease.

Certain intoxications, as poisoning by illuminating gas and chronic poisoning by coal tar products are accompanied by a grave deficiency in the respiratory function of the blood. Normally, hemoglobin forms a very unstable combination with oxygen, absorbing it readily from the lungs, and readily giving it up to the tissues. In these poisonings a considerable portion of the hemoglobin forms a stable combination with the poisons, rendering its respiratory function inert. In these cases, phlebotomy followed by transfusion fulfills our physiologic conditions, and is accompanied by excellent results.

3. The essential pathology of the diseases which are accompanied by disorders of coagulation such as hemophilia, purpura, morbus maculosus neonatorum, the hemorrhagic tendency in jaundice and certain acute infectious fevers, is not well understood. They are characterized by tendency to hemorrhage which is sometimes difficult to control. Here we have to deal with a double problem. The replacement of the blood lost by hemorrhage, if found to be necessary, is easily accomplished by transfusion, but as in pernicious anemia, the procedure may not be curative. Evidence points to a disturbance of the antithrombin-prothrombin balance as the cause of the delayed coagulability. In these cases, the administration of fresh blood serum would be theoretically more effective, since this contains thrombin but no antithrombin. Clinical experience on this point is conflicting. In hemorrhage of the new born, subcutaneous injections of fresh blood or fresh blood serum seem to be entirely sufficient. In six cases of hemiphilia, Ottenberg and Libman[1] found transfusion effective where serum injections had failed, although no mention is made of the kind of serum used, or whether any of the stable preparations of thrombin, such as coagulene, had been tried. Of nine cases of purpura, seven recovered and two died. In jaundice, whole blood transfusion in their hands was disappointing, and it would seem that repeated injections of fresh human serum or thrombin injections alone, would be more efficacious.

4. The infections. Blood is the tissue which fights our battles against infection. If the body is about to be overpowered by infection, might not the transfusion of fresh blood affect the issue favorably? In that case, blood rich in antibodies against the particular organism would be more desirable, a condition which obtains in the blood of convalescents from acute disease. Clinically, this has been attempted in some of the acute diseases, but it has not been attended with the success which we might theoretically be led to expect. We must remember that too great multiplication of the invading bacteria is the essential factor, since their metabolic and dissolution products—their extra- and intra-cellular toxins—are the factors which determine the life

or death of the host. It is conceivable that a sudden wholesale destruction of the invading bacteria might affect the issue adversely. At present, this aspect of therapy is still in its infancy, but it is reasonable to look forward to the development of a technic which may be of great value.

In chronic localized infections of determinable etiology, the transfusion of an immunized blood is distinctly beneficial and may be curative. Ransom Hooker[2] reports the case of a boy of nine suffering from osteomyelitis of the femur whose hemoglobin was reduced to 30 per cent. He had been operated on repeatedly without improvement. Transfusion of 100 cc. of the uncle's blood immunized with the organism resulted in a cure of the boy's osteomyelitis. This is the only case in the literature to my knowledge. I applied the procedure once in a case of chronic subcutaneous abscesses which persisted uninfluenced by other measures including vaccine therapy, for four years. I immunized her sister for about three weeks with ascending doses of the organism and then transfused 400 cc. of blood. I believe now that 100 cc. would have been just as efficient. The patient has had no further abscesses, one and one-half years after the transfusion.

II. *Precautions to be observed preliminary to transfusion.*—The whole history of blood transfusion abounds in instances of fatalities following transfusion of incompatible bloods. Transfusion of animal bloods into humans retarded the development of transfusion for many years. Fatalities following the indiscriminate transfusion of human blood led three of the foremost surgeons of the last century—von Bergmann, Senn and Da Costa—to condemn the whole procedure. Reports in the recent literature of accidents and deaths following transfusion are numerous enough, and represent probably only a small portion of the entire number of such occurrences. It is interesting to note that almost without exception these accidents occurred in cases where no preliminary observations on the compatibility of the bloods for the proposed transfusion were made.

Ottenberg and Libman[1] in a review of over 200 transfusions, state, " In no case in our series in which hemolysis or agglutination did not occur in the test tube were any untoward symptoms observed which could be attributed to these phenomena.

There were three cases in which agglutination of the donor's red blood cells by the patient's serum were observed in the test tube. Two of these patients died shortly after the transfusion, and in the blood smears of both of them phagocytosis of the red blood cells by leucocytes was observed. * * * In the third case, the patient's serum was hemolytic to the donor's cells, and an extensive hemoglobinuria occurred after the transfusion, from which, nevertheless, the patient recovered." Lindemann[3] in 135 cases, reports one case of hemolysis with negative laboratory findings, one case in which he had two conflicting reports from the laboratory, and one in which he transfused the patient a second time from the same donor, with five days intervening. He made no tests preliminary to the second transfusion, but subsequently there was test tube hemolysis. In the light of Ottenberg and Thalheimer's[4] research on agglutination in cats, this is easily explained. They show that cats frequently acquire an isohemolysin after transfusion against blood which was previously compatible. There were no deaths in Lindeman's series.

Experiment has shown that humans fall into four classes as regards the compatibility of their bloods, and that isohemolysins are inherited from either one or the other of the parents. Relatives therefore show less incompatibility than strangers, although it must be borne in mind that if, for instance, a sister is to be transfused with the brother's blood, either may contain isohemolysins from either of the parents. If the parents did not happen to belong to one of our four groups, the bloods of the children would be incompatible, according to Mendel's Law, in 50 per cent. of the cases.

This incompatibility may be readily determined by simple laboratory tests. Moss[5] has shown that hemolysis is always preceded by agglutination, although agglutinin may be present without hemolysis. It has been shown that transfusion in cases where the patient's serum agglutinates the donor's cells, is dangerous. The converse of the proposition is not true to nearly the same extent, although it is questionable whether such blood is of much value to the patient.

Peyton Rous and Turner[6] have recently published a simple method of testing for agglutination microscopically, which may be performed in a few minutes. Blood from the patient and prospective donors is obtained from a skin puncture, and collected in blood counting pipettes which have been rinsed with 10 per cent. sodium citrate solution, and the solution drawn up to the mark 1. Mixtures of the patient's blood are made with that of the prospective donors in the proportion of 9:1, and 1:1. A drop of the mixture is placed on a slide, mixed with a drop of salt solution, and observed under the microscope. Agglutination is readily visible when it occurs, and is usually fully developed in two or three minutes. Agglutination in the 9:1 mixture, with little or none in the 1:1 mixture signifies that the patient's blood agglutinates the donor's corpuscles, and is unsatisfactory for transfusion. The converse may be determined by making a 1:9 mixture. Practically it will be found much easier to obtain the blood for these tests by venous punctures, as it readily clots in the pipettes.

To summarize, we may conclude as follows:

I. Blood transfusion is indicated in

1. Massive hemorrhage.

2. Marked secondary anemias, either as a palliative measure, or as a preoperative measure.

3. Essential anemias.

4. Blood dyscrasias, if fresh human serum injections or thrombin is ineffective.

5. Chronic localized infections of demonstrable eitology not amenable to other treatment. Immunized blood should of course be used in these cases.

II. No blood transfusion should be undertaken without first making agglutination or hemolysis tests of the patient's and donor's blood.

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Editorial

4th February. I went to London, hearing his Majesty had been the Monday before (2nd February) surprised in his bed-chamber with an apoplectic fit, so that if, by God's providence, Dr. King (that excellent chirurgeon as well as physician) had not been accidentally present to let him blood (having his lancet in his pocket), his Majesty had certainly died that moment; which might have been of direful consequence, there being nobody else present with the King save this Doctor and one more, as I am assured. It was a mark of extraordinary dexterity, resolution, and presence of mind in the Doctor, to let him blood in the very paroxysm, without staying the coming of other physicians, which regularly should have been done, and for want of which he must have a regular pardon, as they tell me. This rescued his Majesty for the instant, but it was only a short reprieve. He still complained, and was relapsing, often fainting, with sometimes epileptic symptoms, till Wednesday, for which he was cupped, let blood in both jugulars, and both vomit and purges, which so relieved him, that on Thursday hopes of recovery were signified in the public Gazette, but that day about noon, the physicians thought him feverish. This they seemed glad of, as being more easily allayed and methodically dealt with than his former fits; so they prescribed the famous Jesuit's powder; but it made him worse, and some very able doctors who were present did not think it a fever, but the effect of his frequent bleeding and other sharp operations used by them about his head, so that probably the powder might stop the circulation, and renew his former fits, which now made him very weak. Thus he passed Thursday night with great difficulty, when complaining of a pain in his side, they drew twelve ounces more of blood from him; this was by six in the morning on Friday, and it gave him relief, but it did not continue, for being now in much pain, and struggling for breath, he lay dozing, and, after some conflicts, the physicians despairing of him, he gave up the ghost at half an hour after eleven in the morning, being the sixth of February, 1685, in the 36th year of his reign, and 54th of his age.

The Diary of JOHN EVELYN, *F. R. S.*

The Teaching of Neurology. Just how much importance should be given to the study of neurology in the ordinary curriculum of a medical school remains a debatable question. On the part of those who are called upon to teach a subject to which they are devoting their entire time, there is a very natural tendency to overestimate the beneficial influence of that subject upon the general educational standard of the medical course. By unduly favoring the special departments of medicine, there is a grave danger of hindering the free expansion and full working capacity of the general departments of medicine and surgery which must necessarily embody the main strength of a well organized and logically conceived plan of clinical instruction. On the other hand, it is easy to overlook the general advantages to be derived from fairly thorough training in certain of the special branches of medicine, and this would seem to apply more particularly to neurology, a subject which certainly has not been accorded the place it deserves in the curriculum of the average medical school either at home or abroad. It is not merely a question of ensuring adequate instruction in this special domain of medicine, but of fully appreciating the fertilizing influence which the study of neurology unquestionably exerts upon general diagnostic proficiency. There is no branch of medicine in which pathogeny and diagnosis are so strictly dependent upon anatomy and physiology, no sphere of clinical observation in which the student is forced to so thoroughly rehearse the knowledge he has acquired during his first and second years and to so fully ascertain its practical utility. If for no other reason than that it provides an excellent field of diagnostic gymnastics, the study of neurology has an important task to accomplish in the prepartion of the future practitioner of medicine and it is no exaggeration to state that the diagnostic ability of the general practitioner bears a very definite relation to the training he has received in this special department.

The evident correctness of the foregoing contention was recognized long ago by Dr. Henry Hun, who, far in advance of his time, instituted in the Albany Medical College a course of neurology, the general excellence and practical features of which soon placed it almost on a level with the average post-graduate course of the leading European universities. It was in this course that the first attempt at giving the student thoroughly practical clinical instruction was inaugurated. The weekly didactic lecture on neurology was supplemented by a weekly neurological clinic at which the students themselves presented patients previously assigned to them, and reported in detail the clinical history of the case together with their objective findings, diagnosis and therapeutic suggestions. In this way the student gained immediate access to the clinical phenomena of disease, learned to observe for himself instead of having facts pointed out to him and thus necessarily acquired through natural channels the sense of logical analysis and interpretation.

To facilitate the work of the student, Dr. Hun later conceived the fortunate idea of preparing a syllabus in two volumes, in which the individual diseases of the nervous system are presented in regular order based on the most modern nosologic classification and the space devoted to each disease appropriately subdivided for the tabulation of etiologic factors, anatomic findings, important symptoms and physical signs, pathogeny, diagnosis, prognosis and treatment. Under each of these headings a summary only is given, so that the blank spaces are filled in by the student with notes taken at the lectures as well as from works of reference. The many advantages of this plan are clearly evident. It enables the teacher to give to his pupils the best information obtainable from all possible sources instead of imposing upon them the conceptions and teachings of a single author; it allows the progressive addition of newly acquired facts as well as the systematic elimination of the disproved and superfluous; it ensures the legitimate insertion of personal and original doctrines and forces the student to cultivate the habit of collateral reading. Instruction in neurology has always been given to both the third and fourth year classes at the same time, the subject matter being so divided that diseases of the brain were covered one year and diseases of the spinal cord and peripheral nerves the following year. The utility of holding recitations at stated intervals on the topics covered in the lectures has never been questioned in the department of neurology. Whereas originally such recitations were held only every three weeks, it has become imperative in recent years, with the gradually increasing importance of the subject, to hold them practically every week.

With the steadily widening scope of the department of neurology the necessity of adequate preliminary instruction in the anatomy of the nervous system made itself keenly felt, and Dr. Hun had the good fortune of finding in Dr. Gordinier a willing and enthusiastic helpmate who brilliantly succeeded in meeting this requirement by delivering during the second year a most scientific and abundantly illustrated course of weekly lectures which he subsequently augmented and incorporated in his admirable text-book "The Gross and Minute Anatomy of the Central Nervous System." It has been deeply regretted that owing to his recent appointment to the chair of medicine Dr. Gordinier felt constrained to relinquish the direction of this important course. Finally, during the last ten years, a weekly laboratory exercise of two and one-half hours has been devoted to thoroughly practical work in the gross and microscopic study of the normal and pathological anatomy of the nervous system. In this course the student receives sections of the different levels of the cerebro-spinal axis from the cauda equina to the basal ganglia, as well as typical sections illustrating practically all the known diseases of the brain and spinal cord.

Such is the history of the development of the department of neurology in the Albany Medical College. It is believed that the teaching in this department has reached a stage of thoroughness and practical efficiency not equaled in any other school in this country. In fact it has been objected that the time devoted in our school to nervous anatomy and neurology was out of all proportion to the exigencies of a general medical curriculum. Possibly this criticism may be in part justified, but at the same time it should be a source of immense gratification to him who has created the department and to those who have eagerly and admiringly watched its growth, for it cannot be denied that if the department of neurology has enjoyed exaggerated importance, its practical educational achievements have been helpful rather than prejudicial to the other departments of the college. We shall always remain profoundly indebted to Dr. Henry Hun for having raised the standard of his department to such enviable heights and for having thereby suggested a proper orientation for our efforts and ambitions in other fields of medical instruction.

The plan adopted by Dr. Hun in teaching neurology assures as perfect a training as can be realized at the present time and it is intended to continue it faithfully. In keeping with the actual tendencies in internal medicine, it would evidently be most desirable to increase clinical section-work in neurology and reduce to a minimum the part played by the purely didactic lecture, but while it is earnestly hoped that such ideal conditions will eventually obtain, the scheme cannot possible be carried out satisfactorily under present circumstances. Not only is the available clinical material for this purpose rather limited, but it is quite impossible to secure the services of sufficient men trained in neurology. It must be remembered also that a considerable number of nervous diseases are rarely encountered even in large centres of population, and this fact, coupled with the imperative necessity of constantly referring to anatomic charts or diagrams, renders it obvious that in neurology at least the didactic lecture cannot well be dispensed with and that a large part of the ground can be most advantageously covered in the lecture room and in the general hospital clinic. It should be stated however that every effort is made to render the course in neurology as substantially practical as possible and students doing section work in the medical service of the various hospitals have free access to whatever neurological cases are to be found in the public wards. Occasionally a lecture hour is utilized for a lantern slide illustration of neurological conditions not demonstrable from the clinical material at hand, there being for this purpose an exceptionally varied and instructive collection of pictures derived from some of the leading foreign clinics. In addition, the students of the fourth year class, divided into small groups, have the opportunity on certain days of seeing and examining patients in the various dispensaries and of learning the technique of electro-diagnosis and electrotherapy.

LA SALLE ARCHAMBAULT.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, FEBRUARY, 1916

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	22
Typhoid fever	1
Scarlet fever	0
Measles	2
Whooping cough	2
Diphtheria and croup	1
Grippe	19
Diarrheal diseases	2
Apoplexy	9
Pneumonia	19
Broncho-pneumonia	6
Bright's disease	14
Cancer	14
Accidents and violence	13
Deaths under one year	12
Deaths over seventy years	57
Totals deaths	201
Death rate	22.99
Death rate less non-residents	19.90

Deaths in Institutions.

	Non-Resident	Resident
Albany Hospital	9	11
Child's Hospital	1	0
County Hospital	2	1
Dominican Convent	0	1
Home for the Aged	2	1
Homeopathic Hospital	4	10
Hospital for Incurables	0	1
Public places	1	1
St. Margaret's House	0	1
St. Peter's Hospital	6	9
Maternity Hospital	1	4
Federation of Labor Camp	1	0
Albany Hospital Camp	2	8
Births	0	160
Still births	0	5

BUREAU OF COMMUNICABLE DISEASE

Cases Reported.

Typhoid fever	2
Scarlet fever	15
Diphtheria and croup	11
Chickenpox	11
Measles	244
Whooping-cough	44
Tuberculosis	27
Mumps	66
Septic sore throat	8
Ophthalmia Neonatorum	1
Total	429

Number of days quarantine for diphtheria:
Longest...... 32 Shortest...... 4 Average...... 18
Number of days quarantine for scarlet fever:
Longest...... 41 Shortest...... 30 Average...... 31 6/10
Fumigations:
Houses.................. 142 Rooms.................. 718

Milk bottles disinfected	610
Cases of diphtheria reported	11
Cases of diphtheria, antitoxin used	8
Deaths after use of antitoxin	1

Communicable Diseases in Relation to Schools.

	Reported Deaths		
	D.	S. F.	M.
Public School No. 1	....	....	9
Public School No. 2	....	....	4
Public School No. 3	....	....	1
Public School No. 4	....	....	18
Public School No. 5	....	....	2
Public School No. 8	....	1	8
Public School No. 10	....	....	1
Public School No. 11	....	....	2
Public School No. 14	....	....	17
Public School No. 15	....	....	15
Public School No. 16	....	2	2
Public School No. 17	....	....	10
Public School No. 18	....	....	2
Public School No. 21	....	....	7
Public School No. 22	1	....	1
Public School No. 24	....	1	2
Miss Quinn's School	....	....	1

	Reported Deaths D.	S. P.	M.
Assumption School	....	....	2
N. Y. S. Normal College	....	....	1
Academy Holy Names	..	....	10
St. Joseph's Academy	....	....	1
St. Patrick's Institute	....	2	6
Cathedral School	1	....	7
Lady of Angels School	....	....	1
St. Mary's School	....	....	3
St. Anthony's School	....	....	2

Tuberculosis.

Living cases on record February 1, 1916		478
Cases reported:		
By card	24	
Dead cases by certificate	3	
		27
Total		505
Dead cases previously reported	19	
Dead cases not previously reported	3	
		22
Living cases on record March 1, 1916		483
Total tuberculosis death certificates filed during February, 1916		22
Non-resident deaths:		
Albany Hospital	1	
Albany Hospital Camp	2	
C. F. L. Pavilion	1	
		4
Resident deaths		18

Report of Visiting Tuberculosis Nurse

Old cases	4
New cases	23
Returned from hospitals	2
Totals	29
Disposition of cases:	
Died	6
Sent to hospitals	15
To general tuberculosis nurse	8
Totals	29

Visits made	30
Visits made, old cases	340
Calls at Board of Health office	23

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Diphtheria:	
Initial positive	14
Initial negative	222
Release positive	21
Release negative	90
Suspicious	12
No growth	3
Total	362

Test of Sputum for Tuberculosis.

Positive	10
Negative	59
Total	69

Widal Tests.

Positive	5	Wassermann tests	75
Negative	17	Ice examinations	1
Suspicious	6		
Unsatisfactory	2		
	30		

BUREAU OF NUISANCES.

Complaints made		44
Privy vaults	1	
Closets	5	
Plumbing	8	
Water	9	
Filthy yards	1	
Filthy alleys	2	
Filthy premises	4	
Chickens	2	
Dogs	2	
Garbage	3	
Smoke	2	
Odors	2	
Ventilation	1	
Noise	1	
Unclassified	1	

Inspections		55
Plumbing	40	
Sanitary	15	
Reinspections		54
Plumbing	29	
Sanitary	25	

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections		203
Old houses	51	
New houses	152	
Iron drains		44
Connection street sewers		5
Tile drains		6
Cellar drainers		1
Urinals		4
Cesspools		41
Wash basins		58
Sinks		64
Bath tubs		51
Washtrays		45
Tank closets		84
Permits issued		50
Plumbing	43	
Building	7	
Plans submitted		22
Old buildings	10	
New buildings	12	
Houses tested		42
Peppermint	8	
Water tests	34	
Houses examined		29
Re-examined		45
Valid	17	
Without cause	12	

BUREAU OF DEAD ANIMALS.

Animals removed from First Precinct	26
Animals removed from Second Precinct	16
Animals removed from Third Precinct	14
Animals removed from Fourth Precinct	21
Animals removed from Fifth Precinct	26
Kennel cats removed	165
Kennel dogs removed	177
Total	445

Horses removed	48
Dogs removed	199
Cats removed	195
Rabbits removed	1
Chickens removed	1
Crows removed	1
Total	445

BUREAU OF MARKETS AND MILK.

Public market inspections	16
Market inspections	79
Fish market inspections	7
Slaughter-house inspections	1
Hide-house inspections	3
Packing-house inspections	1
Milk depots inspected	9
Stores inspected	114
Milk cans inspected	154
Lactometer readings	125
Temperature readings	125
Fat tests	96
Sediment tests	132
Complaints investigated	3
Special investigations	3

MISCELLANEOUS.

Work certificates issued to children	14
Vaccinations	9
Cases assigned to health physicians	93
Calls made	183
Garbage collected from First District....bbls.	181
Garbage collected from Second District....bbls.	202

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR FEBRUARY, 1916.—Number of new cases during month, 196; classified as follows: Dispensary patients receiving home care, 24; district cases reported by health physicians, 6; charity cases reported by other physicians, 62; moderate income patients, 67; metropolitan patients, 37; old cases still under treatment, 501; total number of cases under nursing care during month, 697. Classification of diseases for the new cases: Medical, 27; surgical, 9; gynecological, 3; obstetrical under professional care—mothers, 42; infants, 40; eye and ear, 3; skin, 1; throat and nose, 1; dental, 0; infectious diseases in the medical list, 70; infectious diseases in the surgical list, 0. Disposition: Removed to hospitals, 25; deaths, 26; discharged cured, 115; discharged improved, 32; dicharged unimproved, 7; number of patients still remaining under care, 492.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 3; number of students in attendance, 4; number of nurses in attendance, 4; number of patients carried over from last month, 5; number of new patients during month, 8; number of patients discharged, 11; number of visits by head obstetrician, 1; number of visits by the attending obstetrician, 59; number of visits by students, 53; number of visits by nurses, 87; total number of visits for this department, 200.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,732; for professional supervision of convalescents, 761; total number of visits, 2,493—visits to p. cases, 959; visits to ch. cases, 773; unrec., 761; cases reported to the Guild by 3 health physicians, and 49 other physicians; graduate nurses 7, certified nurses 2, pupil nurses 6 on duty.

Dispensary Report.—Number of clinics held, 88; number of new patients, 146; number of old patients, 497; total number of patients treated during month, 643. Classification of clinics held surgical, 14; nose and throat, 9; eye and ear, 18; skin and genito-urinary, 7; medical, 9; lung, 6; dental, 0; nervous, 5; stomach, 3; children, 8; gynecological, 9.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held in the new County Building, Tuesday, March 14, 1916, at 8.30 P. M.

Scientific program.—"Middle Ear Suppuration and Some of Its Complications," Dr. J. J. O'Brien; "Gonorrhoea in Women," Dr. E. J. Wiencke; "A Case of Acromegaly," Dr. N. A. Pashayan.

SARATOGA SPRINGS MEDICAL SOCIETY.—A meeting of the Saratoga Springs Medical Society was held Friday, March 10, 1916, at the Elk's Club, Saratoga, at 9 P. M.

The following papers were read: "Problems Encountered in Routine Roentgenological Examinations for Gastric and Duodenal Conditions" (X-Ray Plate Illustrations), Dr. C. Woodall, Schenectady; "Problems of Surgical Judgment Associated with the Treatment of Gastric and Duodenal Ulcers," Dr. E. MacD. Stanton of Schenectady.

PUBLIC HEALTH COURSE.—The Albany Medical College announced that the following lectures were delivered during the month of March: "Books, Libraries and Public Health," Mr. James I. Wyer, Jr., Director of New York State Library; "Foods and Beverages," Mr. George L. Flanders, Counsel, New York State Department of Agriculture; "City Health Administration, Contagious Diseases and Nuisances," Dr. Arthur Sautter, Health Officer, City Bureau of Health.

REVISION OF STATE SANITARY CODE.—A recent revision of the State sanitary code provides that in a case of infectious disease when no physician is in attendance, it shall be the duty of the head of the household and of the proprietor or keeper of any hotel, boarding-house or lodging-house to report immediately to the health department all facts relating to the illness of any one in the household who appears to be affected with any communicable disease.

NEW AVENUE OF PUBLIC HEALTH EDUCATION.—State Commissioner of Health Biggs, on March 4th, announced that five railroads have given the department of health permission to post health bulletins in their stations. These railroads are the following: New York Central, Delaware & Hudson, Lehigh Valley, Erie, and Pennsylvania. With the cooperation of these five railroads, the department of health will be able to post bulletins in more than 1,000 railway stations.

TO AMEND BOYLAND LAW.—An effort will be made to have the State drug law amended so that a physician may not prescribe a habit-forming drug for a period of more than two weeks and by which the physician will be required to make three copies of the prescription so that one may be filed with the board of health. These amendments were included in the original bill, but were cut out at the time the bill was introduced because of the strong opposition to them which threatened the defeat of the entire bill.

"PATENT MEDICINE" BILL.—A bill has been introduced in the legislature simultaneously by Assemblyman Fertig and Senator Hamilton which aims to compel "patent medicine" manufacturers to inform the public as to the exact contents of their nostrums. The proposed measure follows exactly the provisions of the ordinance of the health department of New York city. The latter earnestly requests every public spirited citizen to give effective support to this measure so that the standard set by the municipality and State of New York will eventually lead to national legislation for the control and sale of "patent medicines."

SANITARY CONDITION OF BOTTLED WATERS.—The Bureau of Chemistry has been investigating the sanitary conditions in the production and distribution of bottled mineral and table waters which are offered for sale in interstate commerce and therefore subject to the Food and Drug Acts. It is recognized that the sale of bottled waters is dependent largely upon the belief by the public in the purity of the product. The bureau has recently conferred with a large number of sanitary experts and bacteriologists regarding a desirable standard for judging the sanitary character of bottled waters. As a result of the investigational work and the above-mentioned conferences the bureau believes that the tolerances established by the Public Health Service of the Treasury Department for waters served on interstate carriers is none too rigid for application to bottled waters sold in interstate commerce or imported from foreign countries. The Treasury Department standards are as follows:

1. The total number of bacteria developing on standard agar plates, incubated 24 hours at 37 degrees C., shall not exceed 100 per cubic centimeter; provided that the estimate shall be made from not less than two plates, showing such numbers and distribution of colonies as to indicate that the estimate is reliable and accurate.

2. Not more than one out of five, 10 cubic centimeters portions of any sample examined shall show by the method of the Public Health Service the presence of organisms of the bacillus coli group.

Civil Service Examination.—The New York State Civil Service Commission will held a competitive examination on April 8, 1916, for the position of superintendent of the Suffolk County Tuberculosis Hospital, at a salary of $2,000 to $2,500 and maintenance. The examination is open only to physicians who are at least twenty-one years of age and residents of and licensed to practice in New York State and have had at least three years' experience in the practice of medicine. The examination will cover questions on the practice of medicine, tuberculosis, and hospital management, experience and training. The hospital is located at Holtsville, Long Island, several miles from a railroad station. Persons desiring to enter the examination must file application on blank form E-10 in the office of the State Civil Service Commission, on or before April 4, 1916.

Public Health Service Hospitals Curb Trachoma.—The establishing of small trachoma hospitals in localities where this contagious disease of the eyes is prevalent presents the best solution of the trachoma problem, according to the statement contained in the annual report of the Surgeon-General of the United States Public Health Service. The Service now has five trachoma hospitals in the three states of Kentucky, Virginia and West Virginia, and so great has been the number of applicants for treatment that a waiting list has been established. In the past fiscal year 12,000 cases of trachoma have been treated, the larger proportion of which were cured, while those in which a cure was not effected have been greatly improved and rendered harmless to their associates. The great majority of these trachoma patients were people who lived in remote sections far removed from medical assistance, and who, but for the hospital care and treatment provided would have remained victims of the disease practically the remainder of their lives.

"When it is considered," the report of the Service states, "that thousands of persons suffering with trachoma, a dangerous contagious disease, would otherwise remain untreated, it is realized how far-reaching results have been obtained through these trachoma hospitals and the other public health work done in this connection. It would be impossible to estimate with any degree of accuracy the number of people who have been saved from contracting this communicable disease by thus removing these thousands of foci of infection."

In addition to treating persons with the disease the hospitals have been used for educational work. Doctors and nurses have visited the homes of the patients and have explained how to prevent the development and recurrence of the disease. One thousand three hundred and eight such visits were made during the year in Kentucky alone. "It has taken some time," the report continues, "to educate the people afflicted with this disease to the importance of cleanliness and the use of simple hygienic measures in their daily life." That results have been obtained is evidenced by the noticeably better observance of hygienic precautions by those among whom the work has been done.

In addition to the hospital work, surveys were made in 16 counties in Kentucky, especially among school children. Eighteen thousand and sixteen people were examined, 7 per cent being found to have trachoma. Similar inspections in certain localities of Arizona, Alabama, and Florida, resulted in finding the disease present in from three to six children out of every hundred. Periodic examination of school children for the disease and the exclusion of the afflicted from the public schools, are two of the recommendations the Public Health Service lays emphasis upon.

One of the special features of the trachoma work was the giving of lectures and clinics before medical societies in various counties where trachoma hospitals could not be established. Patients were operated upon in the presence of physicians and the most modern methods of treatment demonstrated. Throughout, the purpose has been to stimulate local interest in taking up the campaign to eradicate trachoma.

ALCOHOL AND PNEUMONIA.—The United States Public Health Service brands strong drink as the most efficient ally of pneumonia. It declares that alcohol is the handmaiden of the disease which produces ten per cent of the deaths in the United States. This is no exaggeration. We have known for a long time that indulgence in alcoholic liquors lowers the individual vitality, and that the man who drinks is peculiarly susceptible to pneumonia. The United States Public Health Service is a conservative body. It does not engage in alarmist propaganda. In following out the line of its official duties it has brought forcefully to the general public a fact which will bear endless repetition. The liberal and continuous user of alcoholic drinks will do well to heed this warning, particularly at this season of the year when the gruesome death toll from pneumonia is being doubled.

PERSONALS.—Dr. EUGENE J. HANRATTA (A. M. C. '97), Watervliet, was recently appointed postmaster of his city.

—Dr. JOHN C. MERCHANT (A. M. C. '03), Pine Plains, has been appointed health officer of his town.

MARRIED.—Dr. THOMAS A. RYAN (A. M. C. '93), Albany, N. Y., and Mrs. Mary E. Dobler, also of Albany, were married on March 7, 1916.

DIED.—Dr. GEORGE O. WILLIAMS (A. M. C. '66), Greene, N. Y., a Fellow of the American Medical Association, died at his home in Greene, February 24, 1916, from broncho-pneumonia, aged 72.

—Dr. THOMAS H. MANN (A. M. C. '70), Bolton, Conn., formerly postmaster of Fitchburg and editor of the Fitchburg (Mass.) *Evening Mail,* and also of the Milford (Mass.) *Daily News,* a veteran of the Civil War, at one time a member of the staff of Governor Littlefield of Rhode Island, died at his home March 2, 1916.

—Dr. JAY J. MILLER (A. M. C. '71), died recently at the home of his son in Schenectady.

—Dr. EDWARD L. CRANDALL (A. M. C. '81), Troy, a member of the Albany County Homeopathic Medical Society, the New York State Homeopathic Medical Society, the Homeopathic Medical Society of Northern New York, died recently at his home.

—Dr. GEORGE P. RIDER (A. M. C. '88), Wilmette, Ill., who abandoned practice after a short time for mining interests, was shot in Denver, February 9, 1916, and two days later died from pneumonia, aged 51.

—Dr. CALVIN EMERICK (A. M. C. '97), Glasco, N. Y., formerly health officer of Ulster county, State fish and game warden of Ulster county, died at his home, January 26, 1916, from pneumonia.

—Dr. AUGUSTUS C. POST (A. M. C. '11), Catskill, N. Y., was run over by a train at Catskill, January 2, 1916, and instantly killed.

In Memoriam

ALFRED M. YOUNG, M. D.

Dr. ALFRED M. YOUNG, a graduate of the Albany Medical College of the Class of 1862, died at his home in Salem, N. Y., on the 15th of February, 1916, in the seventy-ninth year of his age.

After graduating Dr. Young took a post-graduate course at the Bellevue Medical College in New York city, and then began practice in East Greenwich, N. Y., where he remained for twelve years. In 1873 he removed to Salem, where he continued in active work until the time of his death. He was a member of the County and State Societies, and of the American Medical Association. He was health officer of the town of Salem for many years. In 1873 he married Miss Mary L. Newton of Troy, who died several years before her husband. Dr. Young was a quiet and unostentatious practitioner and gave himself up entirely to his routine work.

Thomas H. Mann, M. D.

Dr. Thomas H. Mann, one of the founders of The Milford (Mass.) *Daily News*, and its editor-in-chief for three years, died March 2, 1916, at the home of his daughter, Mrs. A. K. Peterson, at Bolton, Ct.

Dr. Mann had been in ill health for several months, and his death was not entirely unexpected. He contracted a cold a few months ago, which developed into pneumonia. The attack severely taxed his strength and weakened his heart, and this coupled with Bright's disease, caused him to fail rapidly.

Soldier, physician, editor and author, Dr. Mann during his residence in Milford, and later in Fitchburg, became one of the most widely known men in Worcester county. His forcible writings, particularly on the Civil War, had won the attention of many people in the United States. His editorial career as the successful head of papers in Milford and Fitchburg had made him known to many readers through his virile pen.

Born in Norfolk, April 8, 1843, the son of Mr. and Mrs. Levi Mann, Dr. Mann early revealed unusual mental capacity, and his school work won honors. He attended the Albany Medical School, intending to follow medicine as a profession, graduating with the Class of 1870. He also took a post-graduate course at Boston University. For eighteen years Dr. Mann was one of the leading physicians of Woonsocket, and during that time served as surgeon-general on the staff of the governor of Rhode Island. It was only when his health began to fail that Dr. Mann returned to his pen, which in the days immediately following the Civil War had brought him into national prominence.

Dr. Mann had been a fearless soldier, and during four years he served with the northern army, being enlisted in the 18th Mass. Volunteers. He participated in many of the most notable engagements, and was one of the men who suffered the horrors of the Andersonville prison. For eighteen months Dr. Mann was confined there, but his experiences only served to awaken him further to the real significance of the great struggle, and it was after his release that he appeared as an author.

Under the *nom de plume* of "A Yankee in Andersonville," Dr. Mann wrote a series of articles for the *Century* magazine, in which his logical and able presentation of the causes and features of the Civil War won him commendation and praise. Not only were the articles rich with intelligent understanding, but their clearness and literary quality attracted wide attention.

Dr. Mann was also the author and collaborator with others in the preparation of several books dealing with the war.

Dr. Mann first became interested in the journalistic field in Valley Falls, R. I., and later in Woonsocket. In 1887, having become a resident of Milford, and while engaged in the drug business, he, in company with the present editor, founded the Milford *Daily News*, the first number of which appeared on September 1st of that year. Dr. Mann continued his connection with this paper for three years, when he disposed of his interest to Dr. D. C. Leahy of Washington, and removed with his family to Fitchburg, having accepted the position as editor of the Fitchburg *Evening Mail,* in which he had purchased an interest. The *Mail* was not in the best of condition when Dr. Mann took charge, but he built it up by dint of hard labor until it became one of the leading papers of the city and in Worcester north county. His editorials were masterpieces and many of them, particularly in his support of Democratic policies won wide attention.

In 1896 President Grover Cleveland appointed Dr. Mann as postmaster of Fitchburg, making the selection from a large field of candidates. Dr. Mann served until 1900, winning the reputation of being one of the best postmasters that Fitchburg ever had.

When he completed his term as postmaster, Dr. Mann remained in Fitchburg a short time and then went to Connecticut to live on the farm conducted by his daughter's husband.

Dr. Mann never lost his interest in journalism, and was a student and extensive reader until the end, being well posted on all affairs of the country.

Beside Mrs. Peterson, he is survived by two sons, Dr. Henry L. Mann, Boston, and Philip J. Mann, Worcester. He also has three brothers, Dr. F. W. Mann of Milford, and William and Charles Mann, who still live on the old Mann homestead in Norfolk.

His daughter Josephine was the wife of ex-Mayor O'Connell of Fitchburg, and died several years ago.

Edward L. Crandall, M. D.

Dr. Edward L. Crandall, a well-known physician of Troy and a graduate of the Albany Medical College, died March 6, 1916, at his apartments, 65 Fourth street, Troy. He was born in East Greenbush fifty-nine years ago. Upon graduating from the Medical College in 1881 Dr. Crandall located in Troy. After practicing in that city for a year he returned here and purchased from Dr. E. W. Masten the Albany Homeopathic pharmacy. At the same time he gave considerable attention to his private practice. In 1883 he returned to Troy where he has since built up a large practice. He was a member of the New York State Homeopathic Society, and was a former vice-president of the Rensselaer County Medical Society. In 1884 Dr. Crandall married Emma Bowsher, daughter of William Bowsher of Albany. He was a life member of King Solomon's Primitive Lodge, No. 91, F. & A. M., of Troy, Apollo Commandery, Knights Templar, and the Trojan Hook and Ladder Company. Beside his widow, he is survived by a son, L. H. Crandall of Piermont, N. Y.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Collected Papers of the Mayo Clinic, Rochester, Minnesota. Edited by Mrs. M. H. Mellish. Volume VI. 1914. Philadelphia and London, W. B. Saunders Company. 1915.

In this the latest volume of the collected papers from the Mayo Clinic, some changes in the method of presentation have been adopted which we believe will be of decided value. Some of the papers upon subjects about which articles have appeared in previous volumes have been abstracted to avoid needless repetition. In addition to this an effort has been made to group papers upon the same or allied subjects, thus giving a more comprehensive presentation of the studies. The earlier volumes simply represented a collection of the reprints of articles written by members of the staff without any attempt at group presentation. As usual the most important group of articles deal with the alimentary tract and gastric carcinoma receives especial attention. The ductless glands, a subject upon which much has been written previously at the clinic, occupies a much less prominent place, while the surgery of bones and joints, a subject heretofore not so actively considered, now receives greater prominence. In the earlier days certain subjects received much more attention than others and certain departments of surgery, as, for instance, orthopedics, were almost neglected, but to-day, in the effort to make of the clinic a well rounded surgical center, all the various departments of surgery receive attention and this is reflected in the greater scope and variety of the papers published. Mrs. Mellish, who edits the work, has contributed two excellent papers on "The Construction of Medical Papers," and "The Use of the Reference Library in the Preparation of Medical Papers," which can be studied with profit by every physician or surgeon who attempts to write an article upon a medical subject. The volume as a whole is probably the most satisfactory of the entire series to date and we believe that these volumes will be of increasing value to medical literature. They are, of course, of peculiar interest to the vast number of physicians and surgeons who have visited the clinic and who are more or less familiar with the ideas and methods that prevail there. The book making is as usual attractive and a distinct credit to the publishers. A. W. E.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. October, 1915. Published bi-monthly by W. B. Saunders Company, Philadelphia and London.

Numbers two, three, four and five of volume four are a continuation of the lucid and interesting presentation of cases at Dr. Murphy's clinics. It is quite impossible to give any detailed description of the cases presented, but they are of a very varied character and as usual the chief emphasis is laid upon a careful presentation of the clinical phenomena and the essentials of operative technique in the forceful and striking manner peculiar to Dr. Murphy. The entire effort is to imitate so far as possible in print the actual conduct of the clinic in the amphitheater, thus giving the subject matter a much more lively interest than a mere presentation of the case with comments. The numbers are further embellished by clinical talks by W. J. Mayo, Rodman, Coley and other distinguished surgeons who have happened to be guests at the clinic. The general standard of the earlier volumes is maintained and the excellent character of the illustrations should be especially commended.

A. W. E.

The Treatment of Gonorrhea and its Complications in Men and Women, for the General Practitioner. By WILLIAM J. ROBINSON, M. D., Chief of the Department of Genito-Urinary Diseases and Dermatology, Bronx Hospital and Dispensary; Editor the *American Journal of Urology, Venereal and Sexual Diseases;* Editor of *The Critic and Guide;* Author of Treatment of Sexual Impotence and Other Sexual Disorders in Men and Women; Sexual Problems of To-day; Never Told Tales; Practical Eugenics, etc.; President of the American Society of Medical Sociology; ex-President of the Berlin Anglo-American Medical Society; Fellow of the New York Academy of Medicine; Member of American Medical Editors' Association, American Medical Association, New York State Medical Society, Internationale Gesellschaft für Sexualforschung, American Urological Association, etc., etc. 1915. Critic and Guide Company, New York.

This is a volume of 315 pages. It is a work particularly outlined for the general practitioner, based on the author's original investigations. The earlier chapters are devoted to the morphology and biology of the causal organism of gonorrhea and emphasizes the errors to be avoided in examining gonorrheal material.

Acute gonorrhea and its treatment are fully covered in two chapters, followed by case reports, illustrating the author's technic in the treatment of this type of infection.

Chapters 8-15 are devoted to urethritis of a non-specific origin clearly explaining methods of differential diagnosis and treatment of these common infections.

The treatment of chronic gonorrhea is completed in four chapters, in which the author mentions and explains the use of the various instruments necessary for the general practitioner.

The complications of gonorrhea are discussed in detail in chapters 22-30, the author emphasizing points which are of particular interest to the practitioner.

The materia medica of gonorrheal and non-gonorrheal urethritis and their complications is a very valuable part of this interesting and instructive work. A section on prescriptions introduces the author's favorite methods as well as the standard formulas of others.

The author has produced a work of great value which will be appreciated by all medical men who frequently meet with such cases and require aid.

J. F. S.

American Illustrated Medical Dictionary (Dorland). A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with new and elaborate tables. Eighth revised edition. Edited by W. A. NEWMAN DORLAND, M. D. Large octavo of 1135 pages, with 331 illustrations, 119 in colors. Containing over 1,500 more terms than the previous edition. Philadelphia and London: W. B. Saunders Company, 1915. Flexible leather, $4.50 net; thumb index, $5 net.

The appearance of the eighth edition of Dorland's Medical Dictionary is the best justification of the publication of this admirable book. Since the appearance of the fourth edition in 1896 there has been an increase of three hundred pages, and yet the mechanical work of the book has been on such a high plane that there has been practically no change in size. In spite of the thin paper used there is no transparency and the letter press is of the highest order, the prominent words in heavier type catching the eye easily. The illustrations are appropriate and excellently done. The seventh edition appeared in 1913, and the increase in technical terms has been so great that several hundred have been added. This dictionary is altogether a perfect work, both in accuracy of text and in mechanical execution.

Bone-Graft Surgery. By FRED H. ALBEE, M. D., F. A. C. S., Professor of Orthopedic Surgery at the New York Post-Graduate Medical School and the University of Vermont. Octavo volume of 417 pages with 332 illustrations, 3 of them in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $6 net; half morocco, $7.50 net.

This volume is the natural outcome of the author's extensive study of the subject of bone-grafting as well as the still more extended practical experience in its performance upon the human subject. It presents the best general resumé of the subject to be had in the English language today and really represents in a considerable measure one surgeon's experiences.

The originality evidenced in the work is chiefly connected with the machinery of the operation and the application of the principle to a very considerable number of conditions, many of which are too recent to allow of permanent conclusions as to the value of the methods. Like all pioneers the author is an enthusiastic optimist and the reader must not become possessed of the idea that he can secure such a remarkable percentage of splendid results as the author reports.

Tremendous interest has been taken during the past few years in the subject of bone grafting and there can be no question that the operation is based on sound principles, but that all the results that are sometimes claimed for the bone graft can be commonly obtained is decidedly open to doubt. Five or ten years of further experience will place the whole subject on a more sound and rational basis and the limitations of the procedure will be much better understood.

The volume, which comprises 417 pages, is subdivided into eight chapters.

Chapter one presents the fundamental principles underlying the use of the bone graft in surgery and briefly reviews the work which had led up to the present views.

Chapter two is devoted to a discussion of the author's electric motor operating outfit and the technique of its use. There is little question but that this is the best outfit of the kind that has been devised and is most satisfactory in every detail.

Chapter three describes the bone graft in the treatment of Potts' disease and other lesions of the spine. This is one of the most exhaustive and enthusiastic chapters in the volume, but the claims made for this treatment seem to go a little too far. There can be no question but that the bone graft is a valuable adjuvant to the treatment of Potts' disease, but that it has any directly curative effect upon the tuberculous process itself is somewhat open to doubt. It is quite probable that after a decade of further experience, more guarded claims for the efficacy of this method of treatment will be made.

Chapter five is the most valuable one in the book and deals with the inlay graft in the operative treatment of fractures. The indications for the operation and the technique of its performance are splendidly presented and there is no doubt but that this procedure has come to stay and that it will certainly replace foreign body fixation of fractures in the hands of competent surgeons.

The last four chapters are devoted to the use of the bone graft in a considerable variety of conditions and the operative methods for remodelling or ankylosing the hip joint. Many of these procedures are interesting and some of distinct value, but rather new to pass final judgment upon them.

There are 332 excellent illustrations which add greatly to the value of the work and the art of bookmaking is shown at its best. The author has rendered a distinct service in the presentation of this work and has furnished the profession with an excellent handbook of the practice of bonegrafting to date.

A. W. E.

Surgical Operations with Local Anesthesia. Second edition. By Arthur E. Hertzler, A. M., M. D., Ph. D., F. A. C. S., Surgeon to the Halsted Hospital, Kansas; Swedish Hospital, Kansas City, Mo.; General Hospital, Kansas City, Mo. 327 pages, 173 illustrations. Cloth bound, price $3. Surgery Publishing Company, New York.

In this volume the author has amplified to a very considerable extent the subject matter of the first edition and has endeavored to present the general subject of local anaesthesia in all its essential phases with an especial view to the needs of the general surgeon as well as the occasional operator. The views set forth are largely based on the author's personal experience and for this reason have added value.

The volume contains 312 pages of subject matter with 173 illustrations, the latter being well chosen and executed. The twenty-two chapters into which the volume is subdivided cover practically all the types of operations that can be done under local anaesthesia and indicate very clearly the procedure to be followed in the individual cases. As is natural, the author is a firm believer in the wide scope of local anaesthesia and doubtless in his hands many of these operations are most satisfactorily performed, but in many of the more extensive operations general anaesthesia would certainly be preferable except in rare instances. The employment of local anaesthesia certainly improves the technical skill of any surgeon and greatly increases the deftness, precision and consideration with which tissues are handled. This volume is of distinct value in that it supplies the medical man as well as the surgeon with a brief epitome of the conditions in which local anaesthesia can be employed and presents in considerable detail the method of its employment. A. W. E.

PATHOLOGY AND BACTERIOLOGY.

Edited by Ellis Kellert, M. D.

The Present Status of the Pasteurization of Milk.

S. Henry Ayers, *U. S. Department of Agriculture Bulletin, No.* 342, *January* 8, 1916.

The author defines pasteurization as the heating of milk to 145 degrees F. and holding at that temperature for 30 minutes. Not only are tubercle, typhoid, diphtheria and dysentery bacilli destroyed, but protection is also afforded against foot-and-mouth disease, septic sore throat and scarlet fever. Pasteurization of milk has greatly increased during the past ten years, particularly in the larger cities, so that at the present time 88 per cent of the total supply is so treated in New York and 80 per cent in Boston. The destruction of disease-producing bacteria and yet leaving a maximum number of the organisms that cause milk to sour is the object desired.

Pasteurization destroys 99 per cent of the bacteria and because of the remaining 1 per cent the milk must be handled with the same care as raw milk; kept cold, delivered promptly and protected from reinfection. The organisms that survive are divided into four groups—the acid, inert, alkali, and peptonizing groups. At 145 degrees F. the acid group is the largest and remains so at 170 degrees F. At 180 degrees F. the peptonizing bacteria constitute the largest group. The inert group, which is the largest in raw milk, rapidly diminishes at 145 degrees F. It will thus be seen that the bacterial flora of milk bears a close relation to the temperature.

The milk supply of a large city is drawn from many sources. Since continual inspection of the farms would involve too great an expense, pasteurization is the most practical method for rendering the milk reasonably safe. The heating of milk at the low temperature used at the present time does not destroy the enzymes or produce chemical changes. E. K.

An Experimental Study of Parotitis (Mumps).

Martha Wollstein, *The Journal of Experimental Medicine, March* 1, 1916, p. 353.

Previous experiments by Granata indicated that the virus of parotitis may be filterable and it appeared from the very suggestive experiments of Nicolle and Conseil that the disease could be transmitted to monkeys.

Wollstein used salivary secretion from cases of mumps after passage through a Berkefeld filter. The filtrate was injected into the parotid glands and testicles of cats. At the end of five to eight days there was noted a rise in temperature and lymphocytosis usually preceded, however, by a polynuclear leucocytosis. Swelling and tenderness of the glands was also present. The histological changes in the parotid correspond closely with those found in human beings. There is oedema of the interlobular connective tissue and mononuclear infiltration. In the testes there is found swelling of the interstitial cells; oedema and interference with spermatogenesis, cellular invasion between the tubules is often present. Cats may be immunized by injection with serum from animals permitted to survive the parotid and testicular inoculations. The conclusions drawn are that parotitis is due to a living agent which passes through a Berkefeld filter and which develops an immunity in the inoculated animal. E. K.

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Edited by Frances K. Ray.

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VOL. XXXVII MAY, 1916 No. 5

ALBANY
MEDICAL ANNALS

Original Communications

REPORT OF THE HEALTH DIRECTOR OF THE ALBANY PUBLIC SCHOOLS.

BY CLINTON P. McCORD, M. D.

(*This report covers the year, July* 1, 1914 *to June* 30, 1915.)

July 1, 1915.

Dr. C. EDWARD JONES, *Superintendent of Schools:*

DEAR SIR.—I have the honor to submit to you this, my third annual report upon health work in the schools.

With our present working unit we deemed it wiser to concentrate our routine effort upon a few definite lines than to dissipate it upon a number of school health needs, just as vital, but attention to which does not yield such concrete results. The forenoons are given entirely to routine visitation of schools. The giving of tests for defective vision and hearing to pupils of all the elementary grades would consume all the afternoons, therefore it is evident that if eye and ear tests of all pupils were required from our nurses no time would be left them for the most important feature of their work—the home visiting. We therefore confined our examinations of eyes and ears to the children of those grades that receive routine physical examination by the Health Director, namely, the first and fifth grades, plus miscellaneous cases seen at the time of the morning school visitation, plus a re-examination of cases notified of defects last year but still remaining uncared for.

For the period, July 1, 1914, to June 30, 1915, the following are the quantitative tabulations:

STAFF.

Health director (full time).

Four school nurses (full time).

Dentist (employed for 100 half-days under supervision of health director).

Number of pupils registered		13,593
Number of school visits by health director		186
Number of school visits by nurses		2,054
Number of home visits by nurses		1,165
Number of half-days' professional service by dentist		95
Number of children receiving routine physical examination:		
First grade	1,292	
Fifth grade	1,026	
		2,318

Tabulation (based on the above 2,318 first and fifth grade pupils):

Defective vision:		
First grade	90	
Fifth grade	91	
		181
Glasses secured (based on 191 cases not treated last year, plus 80 of the above 181 defective first and fifth grade pupils)		206
Number of these glasses bought by the Board of Education		28
Number cases of defective hearing:		
First grade	22	
Fifth grade	39	
		61
Number notified		25
Number treated		3
Number cases diseased tonsils:		
First grade	60	
Fifth grade	56	
		116
Number treated		2
Number operated		21
Number cases serious nasal obstruction:		
First grade	3	
Fifth grade	3	
		6
Number cases decayed teeth (three or more):		
First grade	419	
Fifth grade	159	
		578
Treated by dentists		19
Treated at dispensary		173

Number cases poor nutrition:		
First grade	94	
Fifth grade	22	
		116
Number cases nervousness:		
First grade	157	
Fifth grade	120	
		277
Stooped shoulders:		
First grade	220	
Fifth grade	253	
		473
Lateral curvature:		
First grade	152	
Fifth grade	107	
		259
Other orthopedic and miscellaneous defects		35
Enlarged cervical nodes:		
First grade	168	
Fifth grade	97	
		265
Chronic pharyngitis:		
First grade	43	
Fifth grade	107	
		150
Eczema (various kinds):		
First grade	79	
Fifth grade	40	
		119
Marked speech defect		14
Extreme general uncleanliness		18

In addition to the foregoing are the following cases seen at the time of the routine forenoon visits to the schools and spoken of as "miscellaneous cases":

Pediculosis	515
Number cured	72
Number improved	205
Sore-throat with temperature, cultures taken and children excluded	80
Number of "positive" cultures	3
Additional cultures (suspected grade)	39
Number "positive" cultures	2
Eczema (all kinds)	173
Contagious impetigo	29

Ringworm:		
Scalp	9	
Body	21	
		30
Conjunctivitis:		
Simple	33	
Phlyctenular	6	
		39
Discharging ears		30
Favus		3
Scabies		3
"Miscellaneous" cases receiving treatment		123
Emergency treatments		557
Other cases seen by nurses (including styes, headaches, nausea, urticaria, sprains; pupils sent unnecessarily)		2,009
Pupils inspected after absence because of illness		81

Miscellaneous Cases Not Recorded Under Former Headings.

Ozena	1
Fractured radius	1
Extreme general uncleanliness	6
Concussion of brain	1
Alopecia areata	2
Goitre	2
Acute adenitis	2
Mongolianism	2
Cleft palate	3
Organic heart disease with epilepsy	1
Epilepsy	2
Pulmonary tuberculosis	1

Contagious Disease.

Number of Pupils Excluded from Schools for Varying Periods of Time, with Reason for Exclusion.

Pediculosis	277
Scarlet fever	116
Diphtheria	58
Measles	32
German measles	1
Mumps	3
Chicken-pox	161
Whooping-cough	35
Tonsilitis and sore throat	80

Contagious impetigo	29
Scabies	3
Favus	3
Ringworm of scalp	9
Ringworm of body	21
Acute conjunctivitis (simple)	33

The satisfactory arrangement effected with Dr. Arthur Sautter, the city Health Officer, last year for an exchange of reports by telephone each morning, still continues. I venture to state that few city health bureaus in the State are as effectively managed as is the Albany bureau, especially in the matter of co-operation with the school health officers in the control of the acute communicable diseases. Our office has received every courtesy not only from Dr. Sautter but from every member of his staff and office force, and because of this harmonious understanding and ready co-operation we are at all times able to combat these diseases as they occur in school children with increasing satisfaction and along the most modern lines of school hygiene.

Five diphtheria "carriers" were located by means of routine throat culture, excluded from school and quarantined by the Health Bureau, thus protecting several hundred children from exposure to sources of the disease.

HEALTH CERTIFICATES.

Health certificates were furnished by the parents of 1,800 children in the elementary grades. They were filled out by 165 different physicians and the results are as follows:

Number of children having	
Defective lungs	1
Heart lesions	13
Defective glands	94
Hernia	21
Enlarged, cryptic tonsils	254
Frequent sore throat	35
Chronic pharyngitis	24
Adenoids	65
Nasal spurs	14
Digestive disturbances	1
Poor nutrition	3

Poor teeth	58
Other physical defects	81
Communicable diseases	2

School Dental Dispensary.

Number half-days dental dispensary was operated	95
Number children examined	263
Number cases completed	90
Number cases partially completed	173
Number operations (including treatments, fillings, extractions and draining of abscesses)	887

We continue the policy of concentrating upon the preservation of the "six year" molars. This practice of concentration that Dr. Canaday pursues means that a smaller number of cases will be handled, but we believe that more actual good will be accomplished by *adequate* treatment of 200 children each school year than by *partial* care of twice or three times this number.

Several delegations from other states have visited Albany during the past year to study the administration of the dental dispensary, and we have received numerous inquiries from city clerks, corporation counsels, boards of education and superintendents of schools of cities of this and other states in reference to the methods of establishment and operation of this valuable institution.

Ungraded and Special Classes

I believe that the recent appointment of a skilled and experienced director of special classes places the work of these classes on the highest plane of efficiency. The regular monthly meetings of the special class teachers with their supervisor is extremely valuable and marks the earnestness and sincerity of this group, inasmuch as we here find teachers that are actively advancing themselves along the line of their profession while engaged in their routine work. This little band of teachers brings to mind the fact that one of the privileges of workers within a public school system is the opportunity to advance in knowledge of the human aspects of education and its large social background.

I am pleased to report that our "follow up" system for ungraded and special class cases has been initiated and enough work has been done to indicate the importance of this step and to suggest the value that complete records along this line would be to our system. I trust that the future may find us with more time to attack this very important phase of health direction. It is gratifying to follow your policy of extension of the special class system, and I look forward with satisfaction to the opening of the proposed class in the new School No. 14 in the autumn. The need there is a real one and we have more than enough children to fill the class.

It has been our aim to keep our records of all ungraded and special class pupils " up-to-date." This has meant that all children who have been in the ungraded and special classes over a year have received a second psychological examination. As a result of the year's experience with the children from the school standpoint, plus our psychological findings, we have a more comprehensive knowledge of the child as an individual and are in a better position than ever to render a prognosis as to his future progress and development.

There still remains an important part of our work that at present we have time to deal with only in exceptional instances. I refer to the need for intensive study of the delinquent children who are not of subnormal intelligence, and also that larger group of extremely nervous, erratic and peculiar children in the regular grades. I hope soon to find time to begin this work. We have had for over a year in one of our special classes a case of word-deafness, neglected for six or seven years. Under proper attention she is progressing nicely, but it will require some years of work to offset the years of neglect. Before this time has elapsed the child will doubtless pass beyond the touch of the public schools, and still handicapped to a marked degree will live in a relatively helpless condition. This child might look forward to a far different future had her condition been discovered six or seven years ago. Conditions with almost as much bearing on mental development and future personal fitness exist in children scattered through our grades, and I wish to emphasize the need for classification of all such children on the basis of careful psychological examination, and the provision and application of proper treatment and training. This will be possible only with further extension and development of the special class system.

During the past year thirty-one cases have been seen in consultation with physicians or have been examined for various social and educational institutions. These cases represented the feeble-minded, nervously unstable or delinquent types.

A quantitative statement of the year's work follows:

Number of ungraded and special class children under observation and training during the year		166
Cases receiving first examination	96	
Cases receiving second examination	70	
Additional children examined		27
Total number of psychological examinations		193

Space does not permit of a statement of the many interesting conditions revealed by these examinations.

Open-Air Classes.

The old open-air school at Ash Grove place had a maximum attendance of thirty-three pupils. This is too many for one teacher, but Miss Mullin with real open-air spirit never refuses an additional case. Six of her children will be ready to return to the regular schools as seventh grade children in the autumn. Thirty-two children in all were placed in the open-air class at School No. 6. Twenty-one were registered at the close of school in June. About 100 days were missed during the year by these twenty-one children. The average was five absences for each child, usually due to lack of clothing, especially shoes. A few absences were due to illness in the home and a couple of cases to minor illness of the child himself. One child who was extremely anaemic upon entrance and whose parents at first objected to the treatment, gained steadily in weight and improved greatly in his appearance. The last month of school, however, he was kept home, and the family physician later reported the involvement of his lungs. What might have been done for this child in an open-air room had he been discovered several years before! All the children on entering were pale, languid and lacking in mental alertness. A smile upon the lips of any of them was a rare thing.

The gain in weight was steady for all of them. Some of them gained as much as seven or eight pounds during the term. They all had an expert chest examination at the dispensary and all were free from pulmonary tuberculosis. They progressed more rapidly in their studies than they had done in regular grades and their attendance was far more satisfactory. Very few of them suffered from colds or other illness. Toward the end of the year a remarkable change was evident in their appearance and in their mental alertness. They are now smiling, happy children. A hot dinner was served at noon and they slept for an hour. Their teeth were put in good shape at the dental dispensary and they were given tooth brushes and tooth paste and were instructed in the use of them. They were weighed every week.

We are greatly indebted to Dr. Hawn, Chief of the Tuberculosis Clinic, and to his staff, especially Dr. Rissberger and Dr. Lawrence, for their chest examinations of these children. Miss Florence Freeman, R. N., has also co-operated in the investigation of cases for the school at Ash Grove place.

Your proposed open-air school on the roof of the new School No. 14 gives promise of being the finest school of its kind in the United States. We have more than enough cases registered for this school as soon as it is ready to receive them.

Let me mention the fine co-operation on the part of the Director of Vocational Work, and the excellent piece of work that Miss Hendrie has done in connection with the open-air class at School No. 6. The meals that she has planned have furnished these children with about two-thirds of a day's rations, and the effect on their physical condition has been marked.

Miss Walsh, the teacher of this open-air class, has been particularly successful in developing habits of physical cleanliness amongst her pupils; and this is an important part of their treatment.

The excellent co-operation that has existed between our nurses and the attendance officers merits special mention.

During the year the Health Director has examined physically twenty-eight teachers, newly appointed in the system.

The various dispensary chiefs, especially those in charge of the eye clinics, have been most kind in the matter of handling investigated school children referred because of physical defect or contagious skin disease.

The automobile that is now available I am sure will markedly help in handling much of our work in a more expeditious manner.

The length of this report prohibits a discussion of various activities under health direction that have developed to such large proportions as to warrant being dealt with in separate reports. I am looking forward to making comparative health surveys of the various schools, with the end in view of standardizing our work in reference to different sections of the city. It has occurred to me that excellent purposes would be served by the issuance of health leaflets from time to time, dealing with definite health problems in a practical way under local conditions.

During the year the Health Director has given seventy-one lectures and addresses before various audiences. Four talks have been given by the nurses.

Our nurses have now developed experience of great value along their line of work. We miss greatly the earnest, sympathetic activity of Miss Elsa Scherrer, one of our original group of nurses, who was married during the year. Miss Anna V. Spellacy, who filled the vacancy temporarily, showed remarkable aptitude for this line of work. Miss Marie Tripole, the permanent appointee, has taken up her duties with a spirit that speaks well for her future efficiency.

The age record cards for the year have been tabulated.

I recommend the addition to our staff of four part-time physicians and four full-time school nurses, after the plan outlined in my report of last year.

To our nurses, ever loyal and earnest, I feel is due the effectiveness of our routine daily plan. I cannot speak too warmly of their conscientious application to the needs of the system.

To those loyal friends and workers in the school system who from the first, have been alive to the demands of the physical child, I am deeply indebted for help and encouragement.

My gratitude to the Board of Education for interest in and approval of our work can be best expressed by increased effort to merit such interest and approval.

Knowing as I do your broad recognition, as superintendent, of the importance of a definite health program in education, I find pleasure in bringing you this report; for I realize that the concrete results and the scope of work here indicated must be sources of real gratification to you. For your sympathetic appreciation of the ideals we are striving daily to develop as a part of our contribution to the philosophy of education in this city, and for your wise and kindly counsel, I am most grateful.

THE NASAL ACCESSORY SINUSES, WITH SPECIAL REFERENCE TO THE FRONTAL SINUS.

Read before the Saratoga Springs Medical Society January 28, 1916.

By THOMAS J. GOODFELLOW, M. D.,
Saratoga Springs, N. Y.

In the realm of the rhinologist, perhaps no portion of the upper airway has attracted quite so much attention and investigation during the last decade as the nasal accessory sinuses. They have been investigated from many different aspects of medical science. Their anatomy has been studied with a good deal of care, both here and abroad, and their peculiarities as to size, position, relations, drainage, period of development, etc., are now better understood. The physiologists have learned more concerning their functions, the pathologists of their diseased conditions; the bacteriologists have done much in defining their germ offenders, while rhinologists have improved methods of diagnosis, especially in a differential way; that is, in locating the sinus at fault, and better and newer methods of treatment, and a more careful consideration of nasal discharge and pain about the nasal region, have saved lives and brought comfort and cure to those suffering with acute or chronic sinus involvement, which in a large majority of cases were hitherto branded with such meaningless diagnoses as catarrh or neuralgia.

A word to recall these sinuses to mind. There are five different groups of these cells accessory to the nasal cavities, in the visceral cranium, on either side of the mesial plane—ten groups in all. They are the sinus maxillaris, two in number, situated on either side of the nasal cavities in the superior maxillary bone, usually one large cell in each bone; the sinus frontalis, usually two in number, one on either side of the mesial plane, and situated in the os frontale; the cellula ethmoidalis anterior; the cellula ethmoidalis posterior, each several cells varying from 3 to 11, usually 5, and located in the lateral masses of the os ethmoidale, and finally paired cells in the sphenoidal bones, posterior to the ethmoid cells, the sinus sphenoidalis. All except the maxillary sinus drain downwards; that is, they are situated in the roof, as it were, while the maxillary antra are lateral.

When do these sinuses first appear? Are they all present at birth? or to put the question clinically, may a child at birth be a subject for pan-sinusitis? Consider the development in this region. The premature mouth, or stomodaeum, is formed from an unfolding of the epiblastic layer until it meets the anterior end of the fore gut which later becomes the pharynx; from this mouth a diverticulum, "the Pouch of Rathke," is prolonged upward and meets with a similar invagination from the third ventricle of the brain at the sella turcica; they fuse and form the pituitary body; hence the two-fold nature of this gland, the glandular part and the pars nervosa. In the fourth or fifth week of interuterine life the nose appears as a knob or protuberance near the mouth. At first the nose and mouth form a single cavity, but at about the eighth week the horizontal maxillary processes appear and, growing inward, unite, forming a partition between the nasal chamber and the mouth. At the same time on each side a median fronto-nasal plate carrying an incisor tooth descends from the frontal region and fuses with the horizontal maxillary plates, thus forming the hard palate. Centres of ossification for the two halves of the frontal bone appears in the seventh week, the superior maxillary bone in the eighth week, while the sphenoid develops in two divisions, centres for the post-sphenoid division appearing in the eighth week, and that of the pre-sphenoid in the ninth week. It is from the latter than the septum nasi is formed, one centre of ossification on either side of the division. These coalesce and form the septum. Occasionally they do not and the cartilaginous septum remains double in later life, a condition which is now and then met with in doing the submucous resection of the septum, and leads to some perplexity. The centres for the ethmoidal masses appear much later, about the eighteenth week. When do the sinuses appear? The first to appear is the sinus maxillaris, presenting itself as a shallow groove on the inner surface of the bone about the fourth month in utero, and this is the only sinus present at term. The ethmoids develop as a rule at four years, the frontal about the fifth year and the sphenoidal at the seventh year. Hence at birth only the sinus maxillaris presents for infective processes, at four years of age ethmoiditis is possible, in another year the frontal sinus is capable of being diseased, while not until the age of seven can a child be the subject of pan-sinusitis.

All these sinuses and air cells are lined by ciliated epithelium continuous with that of the nasal cavities proper. The ciliae are engaged in the evacuation of the normal secretion of the sinus mucous membrane. The wet specimens here shown will give a clear idea of the very large area of mucous membrane present in the lining of these numerous cavities.

The exact physiology of the sinuses is still somewhat in doubt. Several functions have been attributed. They have been regarded as resonating chambers necessary for the proper intonation of the voice, as serving for secretion of mucus, as assisting in directing the inspired air towards the olfactory cleft, as vestigial organs of smell, as mechanical factors in reducing the weight of the head, or, as lately thought, they assist materially in warming the inspired air. Hitherto that function was thought to have been carried out by the inferior turbinate bodies, and contrary to the former idea that the sinuses filled on inspiration, we now know they do the opposite and are filled with warmed impure air on expiration, and emptied on inspiration, lending their heat to raise the temperature of the inspired air. This fact is occasionally demonstrated in the exploratory trephining of the frontal sinus in which the button comes away without injury to the mucous membrane; then when the patient inspires the mucous membrane draws inward, while on expiration the membrane bulges forward.

As you will see from the specimens here presented, these air cavities are very capacious, and the mucous membrane lining them is subject to all the infective and pathological processes that the nasal mucous membrane falls heir to, as acute inflammations, acute purulent conditions, chronic catarrhal inflammations (serous sinusitis or mucocele), cystic and polypoid degenerations, chronic purulent inflammations (empyema), etc. Certain tumors are found in these areas, myxomatous polypi, and osteoma of the benign type, sarcoma, endothelioma and epithelioma of the malignant type. Tuberculosis and syphilis occur, but are rare. At the present time I have attending my clinic at the Saratoga Hospital a case of hereditary syphilis involving all the sinuses. As the external nose has been largely destroyed the process in the sinuses is easily viewed.

The drainage of any of these sinuses is not the best. In the case of the maxillary antrum it is near the top; that of the sphenoidal sinus is also fairly high in the cavity and considerable accumulation of pus may occur in the sinus before drainage takes place through the normal avenue. All the openings and ducts are small and subjected to further blocking by inflammatory tissue swelling or deformities in the nasal cavities. Hence it is an easy matter for the ordinary secretions or purulent exudate to become locked up and produce their symptoms. The frontal sinus drains into the infundibulum, which passes into the hiatus semilunaris, the maxillary sinus also opens into the hiatus; the anterior ethmoidal cells drain into the middle meatus, thus pus from these sinuses will appear anteriorly and beneath the middle turbinated body. The posterior ethmoidal cells drain into the fronto-ethmoidal space, and pus from here usually drains backwards, although it may come down over the middle turbinate. The sphenoidal sinus drains posteriorly, and pus from these two latter groups will appear in the naso-pharynx. Hence, according where drainage occurs or pus appears, we can divide the sinuses into an anterior group comprising the maxillary sinus, frontal sinus and anterior ethmoidal cells, and secondly a posterior group comprising the sphenoidal sinus and the posterior ethmoidal cells, and accordingly the location of pus in the nose is a very characteristic clue to its origin. In nearly all cases the cause of sinus inflammation is bacterial, in rare instances due to aspergillus or vermes. The diplococcus pneumoniae, the bacillus influenzae and the streptococci are the frequent offenders. At this present time the bacillus influenza is causing a good deal of sinus trouble. In early cases pus due to these aerobic bacteria is not fetid, but anaerobic bacteria of ductal origin may cause the pus coming from the antrum to be so. The bacillus coli, micrococcus catarrhalis and the infecting organism of measles and scarlet fever account for a number of cases. The tubercle bacillus and the spicochaeta pallida occasionally infect the sinuses, usually by extension.

As a rule the morbid anatomy is of a chronic inflammatory nature leading to round cell infiltration. This may be followed by cystic and polypoid degeneration, periostitis, rarifying osteitis, and rarely cares. Syphilis occasionally produces necrosis.

In sinus suppuration, and in any operative procedure to establish drainage here, we must always keep in mind the important structures in the base of the calvarium and also the proximity of the eye, especially in the ethmoid cells and the antrum. Here we have in close relation to the ethmoid and sphenoidal cells at the base of the brain, the menenges, brain, cavernous sinus, pituitary body, internal carotid artery, third, fourth, sixth nerves, the first division of the fifth and the optic nerve.

Referring now to the frontal sinus in particular, we have seen that it is not present at birth, but begins as a budding off from the ethmoid cells at variable times, never before the second year, not as a rule before the fourth and probably infrequently before the sixth. Hence the frontal eminences do not appear before this age. They are, as a rule, two in number, variable in size, even in the same individual, occasionally unilateral, the right usually the larger, smaller in females, as is also the case in the negro race. The largest frontal sinus which I have personally seen was one when the partition between the two sinuses was broken down, would accommodate easily the full length of a Spratt mastoid curette. This was exceptional, however, the case being one of acromegaly. The frontal sinuses extend upward, backward and outward over the orbit, between the two tables of the frontal bone, and are separated from each other by a bony partition, more or less central. Occasionally and especially in large sinuses, irregular trabeculae of bone present in the interior. On vertical section they appear more or less right angle triangular, having in relation the frontal lobes of the cerebrum at the hypothenuse, the orbit and nasal cavities below and the brow exterior. They, like other sinuses, are lined with ciliated epithelium and drain through a narrow frontal duct into the infundibulum, which in turn enters the hiatus semilunaris beneath the middle turbinate. The opening is small and difficult to probe, even in the wet specimen in diseased areas, especially ethmoiditis. The thinnest part of the sinus wall is at the upper and inner angle of the orbit. This sinus, like others, is subjected to acute and chronic inflammations, bacterial in origin as a rule, the B. influenza and the pneumococcus being the common invaders, although a frontal sinusitis has been associated with many other conditions, as measles, scarlet fever, cerebro-spinal meningitis, smallpox, typhoid fever, erysipelas, glanders, mumps, and gonorrhœa. One should not forget such predisposing factors as galvano-cautery, unsterile instruments, nasal douches improperly administered, unsterile plugs and sponges and foreign bodies. Most of the chronic cases are extension from acute attacks, although a chronic suppuration may be associated with malignancy as well as tuberculosis and syphilis.

In acute cases involving the frontal sinus we have as a rule fairly well-marked signs and symptoms. There is frequently the history of an infection which has predilection for the upper air way; acute frontal pain over the frontal sinuses is the rule, but not absolute. It may be marked and radiate about the orbit, toward the vertex, or upper temporal region on the same side. Frontal tenderness is common. Discharge may be present and is frequently canary yellow in color, and the pus appears beneath the middle turbinate. The nasal cavities are congested, especially about the anterior portion of the middle turbinate. There are frequently deformities, especially of septum, causing narrowing of the infundibulum. Puffiness of the upper eyelid, shadowed trans-illumination and shadowed radiogram may be found. Many acute cases, however, never show pus and the majority get better spontaneously, while a number become chronic. Death may occur from cerebral invasion. Resolution usually takes place in from one to three weeks. The keynote to the treatment of these cases is that of secretions or pus locked up elsewhere in the system, viz., drainage, and raising the system's resistance by whatever means possible to overcome the infecting agent. Rest, moist compresses, nasal inhalations of menthylated steam, antipyretics, topical detergents about the infundibulum and suction are all therapeutic agents of value. These failing, operative procedures may be necessary—anterior middle turbinotomy, as a rule, to permit freer drainage, and if orbital or cerebral symptoms intervene then the radical frontal operation is indicated.

Chronic suppuration in the frontal sinus is probably more common than thought for. A considerable number of post-mortem cases, according to Hanke, show involvement (30% of all sinuses). While those suffering from acute frontal sinusitis seek relief from pain, the leading symptom in chronic cases is discharge. Localized symptoms are no necessary part of a chronic frontal sinusitis. A more or less chronic headache or feeling of oppression in the region of the sinus may be all the patient complains of, outside of the discharge. The discharge always appears forward, beneath the middle turbinate. It is variable, may be so slight as to be unconsciously swallowed by the patient or so great as to almost require the constant use of a handkerchief. Associated with it we may have various signs and symptoms and accompanying conditions, referable to neighboring parts, such as nasal obstruction, hypertrophic deformities, polypi, parosmia, anosmia, cacosmia (latter very symptomatic of sinus suppuration), general inflamed condition of the nose and throat, certain eye symptoms, less frequent however with the frontal sinus than the ethmoidal cells, e. g., orbital cellulitis, retro-bulbar neuritis and retinal changes due to pressure on the optic nerve, oedema of lids, central scotoma and asthenopia. If the cerebral area is involved then we have such symptoms as intense headache, and other usual symptoms of irritated meninges. From the discharge passing out over the upper lip we may get certain skin lesions about the nose, as erythema, eczema, facial erysipelas, etc.

The diagnosis of chronic frontal sinusitis is made by observing the discharge, usually yellowish and fairly thick, coming from the region of the middle meatus, associated with more or less frontal tenderness and by a process of exclusion. If pus is seen high up anteriorly, recurring rapidly after cleaning, if it flows more freely when the middle turbinate is pressed toward the septum nasi, if there be shadowed trans-illumination and radiogram of the frontal sinus, then it will be found to be the offender as a rule. If the antrum be washed out, absence of pus excludes it; if it be present, then if its reappearance in course of thirty minutes after washing, the result would indicate frontal sinus involvement, pus coming from the uncleaned sinus. For absolute certainty, an exploratory trephining of the frontal sinus may be done. Treatment of chronic frontal sinusitis is surgical—either intra-nasal or extra-nasal. The pendulum is now swinging to the more conservative intra-nasal treatment, and from the hitherto more frequently performed external radical operation. Better drainage secured by an anterior middle turbinotomy, catherization of the sinus via the infundibulum (which can be done in 50% of cases), with daily irrigations, coupled with efficient recuperative medication and autogenous vaccines, will clear up a large per cent of cases. The puncture of the floor is a dangerous procedure. The extra-nasal operation is the radical frontal sinus operation of Killian, Kuhmt, or Ogston-Luc. The former is preferred, as it deals with the ethmoidal cells at the same time, which are not investigated in the other two methods. A radiogram should always be taken previously to indicate the size and extent of the sinus. The middle turbinate should be previously removed. The sinus is entered over the brow and cleaned; a supra-orbital ridge or bridge is left with its periostium. An opening is then made below the ridge, arc, through the nasal bone into the anterior ethmoidal cells and they are cleaned; then the whole floor of the sinus is removed and the area is cleaned, packed and the wound closed. Packing is removed in forty-eight to seventy-two hours by the nose, and the area is irrigated daily thereafter as a rule. Patients may be permanently cured in this way sometimes within two weeks. Killian gives as indications for radical operation the following: (1) failure of other operations; (2) presence of fistula or abscess, or indications of necrosis; (3) intracranial complications; (4) chronic frontal sinusitis with pain, fever and fetid discharge; (5) persistent headache over the sinus; (6) when the discharge from the sinus remains foul in spite of repeated irrigations; (7) when recurrent groups of polypi are produced by suppuration in the frontal or ethmoidal cells; (8) when a simple purulent discharge is not relieved by careful intra-nasal treatment and patient requires permanent relief.

In conclusion, the careful study of acute and chronic inflammation in these cavities is necessary for the following reasons: (1) It may reveal the true source of many cases of nasal and post-nasal catarrh; (2) distant and sometimes obscure symptoms may be traced to sinus suppuration; (3) frequently it is due to nasal affections otherwise unrecognized; (4) more sinuses than one may be diseased; (5) a complete diagnosis of all sources of pus in the nose is important; (6) a certain number of cases tend to become fatal; (7) treatment yields very satisfactory results and is sometimes an easy matter, while in certain cases its management requires special study and skill and the treatment is not devoid of danger.

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THE OCULAR CAUSES OF HEADACHE.

Read before the Medical Society of the County of Albany, March 23, 1916.

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Headaches are common and, although often from ocular strain, are frequently unrecognized as such by patient and physician. To help in this symposium to-night, I ask your indulgence while together we go over the essential points of etiology.

The cadaver shows the extra-ocular muscles, four recti and two obliques, the accessory muscles of accommodation, the orbicularis palpebrarum, the occipitofrontalis and corrugator superciliae. Recall the action of each and you see immediately that any abnormality must cause some nerve irritation, usually pain. The stereoscopic slides show the interior of the eye, the ciliary muscle and ciliary processes. Contraction of the ciliary muscle causes a narrowing of diameter allowing the lens to bulge increasing its antero-posterior dimension and the eye to be focused for close things. Relaxation of the ciliary muscle causes the lens to become thinner and the eye focused for distance.

Structurally we consider the condition known as farsightedness, hyperopia; the eyeball is too short, the lens must become more convex to focus objects clearly on the retina and this is only possible by increasing the ciliary muscle contraction.

In myopia, or nearsightedness, the eyeball is too long, so distant objects are accordingly indistinct but the near ones clear and the ciliary muscle relaxed.

In astigmatism the rays of light are not brought to one focus, and the ciliary muscle must contract irregularly. Binocular muscle balance must always be maintained or we will have strabismus or other muscle defects.

Associated with hyperopia are an excessive convergence and increased action of the accessory muscle of accommodation, the occipito-frontalis; the result is pain in the forehead or back of the head. In astigmatism the same cause prevails, but in myopia there is no excess of convergence, so that in actual experience we have few ocular headaches in simple myopes.

With this foundation we may state that the classical case of eye headache is the one coming on in the late afternoon and persisting until the eyes are rested either by sleep or by closing them. The reason for this pain at this time is the fatigue of accommodation resulting in muscle cramp; naturally relief may only be secured by proper optical correction.

The most common eye headache is frontal and the next occipital. Both are the result of overaction of the occipito-frontalis muscle and both may be present in the same patient. Temporal, parietal and vertex headaches are less frequently cited, as is also the pain at the nape of the neck, although the latter is absolutely characteristic of an eye lesion, usually extra-ocular muscle imbalance. This pain, which may extend to the shoulder blades and to the ears, is much more often due to eye strain than any of the other frequently quoted causes. The feeling of a constricting band about the forehead, of a drawing sensation, especially toward the inner corner of each orbit or a dizziness with sense of confusion in a crowd, are not unusual complaints depending upon the eyes as cause. An acute, severe, unilateral headache, preceded by a dancing, scintillating light with blurring of objects and followed by nausea with vomiting, true migraine, is also to be considered as ocular at times.

Hereafter, when a patient comes complaining of headache, ask him to put his hand on the most painful part, for you will often find such rough localization to be of much assistance. Having determined the site of pain, the next point is the time of the discomfort. Naturally there must be a considerable error in the average patient's statement, but you will note that eye headaches may be at any time of day from early morning to late at night, after close work, after distant gazing, after exposure to sunshine and glare, after a train, trolley car or automobile ride, after theatre and movie picture shows.

Let us consider the morning headache which many otherwise competent observers claim is not due to eyes and yet we often find that proper ocular correction succeeds in bringing about a cure. Do not mistake the typical nasal sinus headache, which disappears after the patient has been up a few hours, for the ocular headache. In sinus involvement, there is evidence of discharge from nose and local sinus tenderness as well as loss of clearness on sinus illumination. The eye headache often follows prolonged use the preceding evening, although that is not necessary, for it may even follow a restful sleep. The afternoon and evening headache is explained on a pure muscle basis, as is also the pain after close work. Bright light causes a contraction of pupils, orbicularis palpebrarum and occipito-frontalis, giving the common browache. Riding in any vehicle demands constant readjustment of focus, both ciliary and extra-ocular muscles, resulting in fatigue. The same reason obtains for the frequent headache in patients with refractive errors who do not wear their glasses at the theatre. It is not uncommon to have severe headache with a low refractive error.

The duration and frequency of headache attacks afford a prolific field of observation and unfortunately wrong deductions are common. Some patients have daily headache which passes away only after sleep, others have them once a week, some once in four weeks, still others at irregular intervals; these latter types are often confusing. To prove to the patient that headache is ocular is many times difficult. To wear glasses is at least an annoyance and you will be surprised to find the number of the fair sex who will continue to endure pain rather than wear glasses. In this connection, remember that a patient may have many complaints based on the real basis of several anatomic faults, and the correction of one may be sufficient to restore balance with cure of headache. This is a very important consideration, for in these days, when glasses are ordered from plain lenses to high compounds, cause and effect must be correlated; otherwise too much credit may be given to a single treatment. Do not neglect the Sunday and Monday headache, often the result of overuse. As an example, a patient has an uncorrected refractive error; he holds his ciliary muscle under tension all the week; on Sunday his eyes are used little, his muscle relaxes. Monday he returns to his desk; an extra effort of accommodation is demanded and headache results.

Doubtless you have all had patients who casually speak of their headache, considering it a necessary evil, and who think that because father, mother or some one in the family has always had such headaches they must submit to the inevitable, use drugs or fold their hands in resignation. Fortunately such reasoning is fallacious and often it is proven that both sufferer and parent have eyes of similar kind producing like pain. Accordingly, many who have chronic headache may be cured by proper eye attention.

Consider headache in relation to age and you are immediately impressed by the fact that many of your patients who have always complained of headache lose them when between forty and fifty years of age. All sorts of causes are given; if it be a woman her condition is considered the cause, but if that be so why do men lose the same type headache at the same time? Simply and solely because the ciliary muscle loses its power of contraction and thus its ability to cause pain. Hence the reason for many reported patent drug cures and the faith some patients have in the doctor who cared for them when the relief was obtained. When a youngster with a refractive error starts school, a common complaint is headache. Eyes in need of help may also show reddened eyelids, poor vision or gastric disturbances. Never forget that very poor vision may cause no headache. Old age forms another group because of the frequent complaint of dizzy headache. This headache occurring in an arterio-sclerotic patient is not the result of the supertension, but of a refractive error which is abundantly proved by personal observation. From these few suggestions it should be evident that the age factor must always be considered in the correct interpretation of any headache. A group of patients will not complain of frank headache but will report insomnia. All cases of insomnia need to be carefully refracted.

So far we have considered headache the result of refractive or muscle eye lesions presenting no ocular inflammation to suggest the local cause. It is well to bear in mind that perfect distance and near vision does not exclude the eye as the cause of a given headache. Unless the ciliary muscle is paralyzed in testing, you are unable to measure the antero-posterior diameter of the eyeball which is refraction base. Also recall that the two eyes must look at the same object at the same time or there will be an extra-ocular muscle strain with headache.

When the refractive error of the eyes is unequal, on attempt to focus there is an irregular muscle effort, a different degree of stimulation to ciliary and extra-ocular muscles and the object looked at is of unequal size. This different muscle action frequently causes headache. If you recall some of your one-eyed patients, you will be struck by the comparative infrequency of ocular headache.

A second group considers the inflammatory eye lesions. It seems hardly necessary to dilate on this obvious cause of headache, but for completeness we ask you to consider the frontal headache common to one with an acute or chronic conjunctivitis exposed to bright light, easily avoided by the use of proper protecting lenses.

Iritis with the attendant ciliary congestion, iris discoloration, contracted pupil and poor vision is often the cause of an excruciating diffuse headache.

Glaucoma with nausea, vomiting, general prostration and intense headache is unfortunately too often neglected, although the dilated pupil, congested eyeball and poor vision is enough on which to base a proper diagnosis.

Chronic glaucoma with no inflammatory symptoms is an ever-increasing cause of chronic headache.

Keratitis of various types may cause severe headache often wrongly diagnosed in the early stage.

The conditions explained by Dr. Archambault and Dr. Rooney are often combined with refractive errors or local eye disease in such a way that only the closest co-operations of internist and ophthalmic surgeon enables the patient to get proper care; for example, chronic nephritis and cerebral tumors.

To summarize:

1. Ocular headache may be the result of a refractive or muscle error or local inflammations.

2. Ocular headache, although most common in the afternoon, may be at any time of day or night.

3. The headache of middle life demands careful ocular examination.

4. Ocular headache may be present even with perfect distance and near vision.

5. In no case is the eye excluded until a cycloplegic has been used.

6. Occipital pain and nape of the neck discomfort extending even to the shoulders is often of ocular origin.

7. When proper correcting lenses are ordered, they must be worn as directed and must be accurately placed before the patient's eye.

Editorial

> All this time the surgeon was cutting off his trousers, and then, to be sure, a terrible spectacle presented itself. The foot and leg, blue and shrunk, were connected with the thigh by a band of muscle about two inches wide, and an inch thick; that fined away to a bunch of white tendons or sinews at the knee, which again swelled out as they melted into the muscles of the calf of the leg; but as for the knee bone, it was smashed to pieces, leaving white spikes protruding from the shattered limb above, as well as from the shank beneath. The doctor gave the poor fellow a large dose of laudanum in a glass of brandy, and then proceeded to amputate the limb, high up on the thigh. Bang stood the knife part of it very steadily, but the instant the saw rasped against the shattered bone he shuddered.
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> "I am going, Cringle—can't stand that—sick as a dog"—and he was so faint that I had to relieve him in supporting the poor fellow. Wagtail had also to go on deck, but Paul Gelid remained firm as a rock. The limb was cut off, the arteries taken up very cleverly, and the surgeon was in the act of slacking the tourniquet a little, when the thread that fastened the largest or femoral artery suddenly gave way—a gush like the jet from the fire-engine took place. The poor fellow had just time to cry out, "Take that cold hand off my heart!" when his chest collapsed, his jaw fell, and in an instant his pulse stopped.
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> *Tom Cringle's Log.* MICHAEL SCOTT.

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The Teaching of Anatomy. The pursuit of anatomy is the romance of medicine. There is tradition that the first anatomist, Herophilus the Chalcedonian, obtained the bodies of executed criminals for dissection, and that life was not always extinct. The pioneer of the modern era, Vesalius, carried on his investigations against hostility of a superstitious age, and even abandoned his researches, though his pupil profited by his retirement. Knowledge of anatomy, even at a very recent date, was attained under difficulties, and students of a generation gone might narrate some thrilling midnight forays not altogether free from risk. Dr. Alden March, in one of the historical addresses of his later years, told of his drives into Massachusetts, whence he returned with contraband beneath his buggy seat.

The original "Albany Medical School" was really a school of anatomy. In the modest circular of 1833 was given a list of six "instructors":

> Edwin James, M. D., On Chymistry and Natural History;
> Alden March, M. D., On Anatomy, Physiology and Operative Surgery;
> Henry Green, M. D., On Obstetrics and Diseases of Women and Children;
> William Tully, M. D., On Materia Medica, Pharmacy and Therapeutics;
> Theodore Woodward, M. D., On the Principles and Practice of Surgery;
> John James, M. D., On Theory and Practice of Medicine.

Fifty-one students were enrolled, and there was a page of "notices," stating the "terms" upon which the candidate was entitled to the degree of Doctor of Medicine, to be conferred by the "Vermont Academy of Medicine, in Castleton."

The practical work of this school was dissection, which is said to have been carried on in a stable on Eagle street, still in existence and near the jail building which was later to become the Albany Hospital. When the Albany Medical College was established in 1839, Dr. James H. Armsby began his long and active career as Professor of Anatomy. He set aside an apartment in the College building, and the result of his unremitting industry and energy is the anatomical museum. As the College grew and the dissecting room became the center of practical work, economy in the use of material was necessary, and for years the custom prevailed of assigning the five parts of each "subject" to an equal number of students. They were directed or assisted by a demonstrator. A definite amount of work was required and examinations were held. Didactic lectures, illustrated upon the cadaver and by charts, were given until a recent date. The late Professor Lewis Balch, a fluent orator and an accomplished draughtsman, vivified these lectures by crayon sketches upon the blackboard, and his conduct of the department was characterized by rare brilliance. He was succeeded by Professors Samuel R. Morrow and Joseph D. Craig, in turn, who held the admiration of their classes by the exactness of their knowledge, and accuracy of demonstration.

But times change and men change with them, and the old order yields to the new. The inevitable momentum of progress has accomplished two things for anatomy and for general medicine—it has placed each upon a scientific basis, and it has made that basis common to both. The teaching of anatomy, as the fundamental and primary department of the medical course, may determine the attitude of the student to all of the work which is to follow, for the technique, principles of observation and methods of thought acquired during the first few months are not of restricted application to this science alone. The laboratory system of teaching has done more than anything else to bring biology, zoology and botany to the front in progress; and to anatomy belongs the credit of the first adoption of its principles. The influence of von Baer, Virchow and Waldeyer has been felt, and felt strongly, because they were masters of anatomy and held fast to the value of the laboratory method.

By the concentration method of instruction now employed in the Albany Medical College, the teaching of anatomy is contained in the first term of the year. The succeeding term is left free to the teaching staff for the prosecution of research work. Such arrangement permits the development of the highest type of teacher—one who takes not merely a passive interest in his science, but contributes to its enlargement. Anatomy is not simply a descriptive science, nor is its purpose and end the acquisition of knowledge of the architecture of the cadaver. The human body is not the limit of its inquiry, much less the dead body; its eye is upon the structure of living organizations and functionating cells. It now comprises descriptive, or systematic, gross anatomy; physiological, topographical, regional and surgical anatomy; comparative anatomy; histology, or general anatomy, including cytology, comparative histology, embryology; and, there has been added in recent years, general, experimental morphology. The broad scope of the science prohibits, save in the instance of a few men of training, a thorough mastery in a life-time. Students are not expected to acquire in a year and a half of college work more than a superficial knowledge of it.

But in that short time they may learn the methods of the science, appreciate the manner in which it is growing, and understand its relation and significance to the broader field of general medicine.

The general direction of progress is away from the formal, rhetorical lecture. The student wants methods, not results; he wants to see and feel for himself, and to draw his own conclusions—to get his information first-handed: he wants to learn how to observe and how to think, not what to learn and what to think. Each student receives, on the first day of the course in gross anatomy, a box of bones of the skeleton, and is assigned to one-half of a properly embalmed cadaver. Dissection begins with the first hour of the course. All formality is omitted. After the wrappings are removed the student scrutinizes its general shape, size, position, color, and surface contour, making mental note of the salient features, irregularities, depressions, grooves and the like. He next palpates the entire region, prodding his fingers into the recesses and hollows and noting the differences in resistance, corroborating his discoveries by reference to the skeleton. This plan of physical examination and observation remains with him during his medical career. He observes the skin, its varied character in different areas and the peculiarities of its appendages. He then revises his investigations with the assistance of a hand magnifier, and finally is shown dissecting-room specimens of skin under the microscope, and, in addition, sectioned and stained specimens. After removal of the skin the same methods of observation are applied to the subcutaneous tissue with its arteries, veins, nerves and lymphatics. As a result he acquires, through his own efforts, a comprehensive and clear grasp of the nature and intricate structure of the tissues under investigation. He is encouraged to take notes, make rough sketches and measurements, and to tabulate. The use of modelling clay is pointed out, that he may train himself in the reproduction of anatomical parts. Whenever extraordinary tissues are encountered the histological preparateur is placed in use, and they are properly stained and studied under the high powers of the microscope. Visceral anatomy, malformations and developmental defects are analyzed with the same care.

Several important changes have been made necessary in order to arrange accommodations in the College building for the three subdivisions of gross anatomy, histology and embryology. The dissecting room is now on the second floor in the room formerly used as the museum. This large room, with its high ceiling, ample air space and side and overhead illumination, is a very satisfactory laboratory for this kind of work. The room on the second floor of the north wing, once a chemical laboratory, has been painted and renovated, electric lights have been installed, additional windows made, and it becomes a serviceable histological and embryological laboratory. Individual students' desks, to the number of thirty, have been placed in this room.

Since the teaching is concentrated into the first term of the year and occupies all the time of the teaching staff, research work in anatomy has just begun, but the manner of the beginning speaks for an excellent showing in advance along medical lines. The introduction to surgery and to medicine will be made during the first term of the second year by a series of courses on regional, topographical and surgical anatomy. The elaboration of the details of these courses will be made upon the general plan of instruction in anatomy.

Scientific Review

Progress in Pathology and Bacteriology.

PNEUMONIA.

The presence of pneumococci in the mouths of all healthy individuals has been known for many years and it was believed that these organisms under certain conditions of lowered vitality or diminished resistance induced pneumonia. Recent investigations point to the probability of pneumonia being a contagious disease and that the pneumococci found normally in the mouth rarely are the cause of pneumonia in the same person. There are different strains of the pneumococcus, and following the suggestion of Neufeld, these organisms are divided into four groups or types by immunologic tests.[1] [2]Types I and II have been isolated most frequently in pneumonia and for the treatment of patients infected with Type I organisms there has been developed an immune serum obtained by inoculating horses with this strain of pneumococcus isolated in pure culture. Although the early reports have been favorable, several years must elapse before sufficient data will be available to determine the efficacy of the serum treatment.

SCARLET FEVER.

The frequent presence of streptococci in the throats of scarlet fever cases led to the opinion that this organism might possibly be the etiological agent. In milk-borne epidemics of scarlet fever, the milk on examination has been shown to contain large numbers of virulent streptococci. Dick and Henry,[3] by means of anaerobic cultures, isolated hemolytic streptococci from the blood, spleen, lymph nodes, and urine of scarlet fever patients. Occasionally, diphtheroid organisms were also found.

EPIDEMIC POLIOMYELITIS

Flexner[4] announces the etiology of poliomyelitis to consist of minute globular bodies present in the nasal and buccal secretions. The organism is transmitted from person to person and not by insects, although M. J. Rosenow[5] showed that the virus could be carried for a time by the stable fly. The organism has been obtained in pure culture by Flexner and Noguchi. The lesions of poliomyelitis can be reproduced in monkeys inoculated with this organism.

TYPHUS FEVER.

The publication by Plotz[6] of the discovery of the microorganism causing Typhus exanthematicus has created wide interest. Plotz carried on his investigations at Mt. Sinai Hospital, working on a number of patients entering New York harbor. In eleven out of twelve cases he was able to isolate, by means of anaerobic blood cultures, a small Gram-positive pleomorphic bacillus which is not acid-fast and possesses no capsule or polar bodies. The organism when inoculated into guinea pigs induces a typical febrile reaction, and in six out of eight cases a complement-deviation reaction has been obtained.

STREPTOCOCCUS INFECTIONS.

The experience of the past few years shows that streptococci of great virulence may produce infections of the upper respiratory tract and a variety of complications ensue. The infection has appeared in epidemic form and in many instances these epidemics were traced to the milk supply which was contaminated either by a cow with diseased udders or by a milker ill with sore throat.[7]

Theobald Smith[8] noted the presence of two varieties of pathogenic streptococci in the udders of cows, a human and a bovine type. These may or may not occur with mastitis and the fact that the human type of streptococcus may proliferate actively in the milk reservoirs of the cow without inducing inflammation is noteworthy. There is no evidence, however, that the bovine type produces tonsillitis in man. Milk may also be contaminated by the faeces of the animal or by infected cows licking the udders.[9]

Rosenow has contributed extremely interesting studies on the relationship of streptococci to various diseased conditions. By means of a special technique, he has been able to isolate pathogenic streptococci from the blood in cases of rheumatic fever, from the glands draining joints in arthritis deformans, from gastric and duodenal ulcers, appendices and the gall-bladder in inflammatory conditions, and also from the centres of gall stones. These streptococci were frequently isolated in pure culture, but occasionally were accompanied by staphylococci, colon and diphtheroid bacilli.

Rosenow also made the interesting observation that streptococci when isolated and inoculated into animals appeared to attack the organ or tissue similar to that from which they were obtained. Thus the organisms isolated from the gall-bladder induced cholecystitis[11] in animals, and when obtained from the joints cause arthritis when introduced into the blood. These experiments lead to the new conception that certain bacteria may have a selective affinity for a particular organ or tissue. The streptococcus isolated from a case of cholecystitis produces cholecystitis in a rabbit when inoculated intravenously. Rosenow infers that these observations explain the good results reported as following cholecystectomy in myocarditis, arthritis and other conditions.

An investigation of appendices[12] removed at operation revealed the streptococcus in most cases. The results indicate that appendicitis is commonly of hematogenous origin and secondary to a distant focus of infection. Attention is called to the mouth where tonsils and teeth frequently harbor pathogenic organisms. The occurrence of appendicitis in epidemic form when throat infections are prevalent is also noted. In the study of gastric ulcer, Rosenow[13] was able to isolate streptococci in twenty-three of twenty-four cases. In eleven cases where the adjacent lymph nodes were cultured, six yielded streptococci. In two of these instances the Bacillus welchii was also found.

DIPHTHERIA.

A new clinical test has been devised, by means of which individuals susceptible to diphtheria may be detected. Experience shows that only those individuals contract diphtheria who have no antitoxin in the blood or tissues. The test was devised by Schick and is carried out in the following manner. An intracutaneous injection of 1/50 M. L. D. of toxin in 0.2 cubic centimeters of saline solution is made on the extensor surface of the forearm. If antitoxin is absent, as it would be in the case of a susceptible individual, there appears at the site of injection in twenty-four to forty-eight hours a circular area of reddening usually one or two centimeters in diameter. It persists for seven to ten days and leaves a brownish pigmentation. Patients who are immune develop no reaction. The toxin must be fresh and the dosage carefully estimated. Park and Zingher[15] find the test of great practical value, since immune individuals need not be isolated or given antitoxin in the presence of epidemics. According to Moody's[16] results, the most susceptible age is one to five years. In severe cases early and large doses intravenously are advised since antitoxin so used is ten times as effective as when used by the ordinary method.

The application of the method in a modified form to guinea pig inoculation is also in use at the present time to differentiate the virulent from the non-virulent diphtheria bacilli. This procedure should result in the release of many so-called diphtheria carriers, in whom the organisms, morphologically the B. diphtheriae, are non-pathogenic.

VACCINE VIRUS.

Despite the great care used in its preparation, vaccine virus is frequently contaminated with micro-organisms and a method for obtaining the virus bacteria-free would be of great value. This has been accomplished by Noguchi[17] who exposes the virus to ether and then inoculates the testes of animals. The virus grows readily in the testicle of the rabbit, sheep and calf, reaching its height on the fifth day and begins to decline on the eighth day. It is estimated that forty rabbits or four calves will yield one thousand cubic centimeters of vaccine. Prepared in this manner the elimination of bacteria should result in less criticism of the method of vaccination and fewer disagreeable medico-legal experiences.

HODGKIN'S DISEASE.

Hodgkin's disease has always been a condition difficult to classify either clinically or pathologically. This is largely due to a lack of knowledge of the etiology and natural history of the disease and also because of the varying histological picture. In certain instances the disease acts very much like an infection; in others, very much like a neoplasm, and in a few cases appears to bear some relation to leukaemia. Bunting[18] and Yates reported the finding of diphtheroid bacilli in the glands of a number of cases of Hodgkin's disease and ascribed to these organisms an etiological rôle. Cultures of these bacilli inoculated into lymph nodes of several monkeys produced changes which were thought to resemble those found in Hodgkin's disease. Patients treated with vaccines made of these diphtheroid bacilli and at the same time subjected to X-Ray therapy showed clinical improvement.

The wide prevalence of diphtheroid bacilli and the frequency with which they can be isolated from a variety of pathological tissues should make one extremely critical regarding their disease producing qualities. Diphtheroid organisms may be isolated from the mouth, vagina, urethra and skin in normal individuals and recent investigation shows them to be present in the blood of scarlet fever cases, leprosy, appendicitis and ulcers due to a variety of causes. The clinical progress of these cases fluctuates greatly and marked retrogression in size of the lymph nodes has been known to occur after arsenic or X-Ray therapy and even spontaneously.

TUMOR INVESTIGATION.

Not since the discovery that malignant neoplasms could be transplanted from mouse to mouse and rat to rat has any work aroused such lively interest as the discovery by Rous and Murphy[19] of a chicken sarcoma which yielded a filterable virus. The tumor was originally found in a Plymouth Rock hen, and after a series of transplantations yielded successful "takes" in a large percentage of experiments. It was found that the tumor could be ground into a powder, and after remaining in this dried, pulverized condition for many months would, on subcutaneous inoculation of a hen of the same species, reproduce the tumor. The filtrate obtained by passing an emulsion of the tumor through a Berkefeld filter, which held back the smallest visible organism, also reproduced the tumor and furthermore it was noted that the virus of this sarcoma could be subjected to the action of such agents as alcohol and glycerine and still remain viable.

Continuing studies on this tumor, Murphy[20] found that it grew readily when transplanted into chick embryos and that a distinct antagonism existed between the growth of lymphoid tissue and the tumor. The inoculated sarcoma grew steadily until the spleen and bone marrow appeared, after which the tumor retrogressed. Splenic tissue inoculated with the tumor inhibited the growth of the tumor and caused the graft to disappear. These experiments and earlier observations on the lymphocytic infiltration about tumor transplants in non-susceptible animals point to the lymphocyte as bearing a very important rôle in the immunity process. Murphy and Morton[21] find that in animals resistant to cancer a lymphocytosis occurs directly after inoculation. If the lymphocytes are destroyed by means of repeated doses of X-rays the resistant state is abolished and a normally immune animal becomes susceptible to the tumor inoculation.

The occurrence of gastric carcinoma in rats in certain parts of

Denmark was investigated by Fibiger,[22] who believes the growth to be caused by a new species of Spiroptera, or small round worm found in cockroaches. The tumor was found in the stomachs of rats caught in sugar warehouses. In his experimental work, Fibiger fed ninety-one rats with infected cockroaches, and of these twelve developed carcinoma. The tumors appeared in three or four months, and in one case metastases were noted.

The work of Tyzzer[23] on the influence of trauma on the incidence of tumor metastases is also of great interest. Tyzzer observed in his experiments with a cancer of the Japanese waltzing mouse that when the tumor implant was massaged after a short period of growth, the metastases appeared much sooner and in larger numbers than in the tumor which was not massaged. Jones and Rous[24] also noted that the injured peritoneum is much more suitable for the growth and lodgment of mouse tumor and that connective tissue reacting to an injury grows more profusely in vitro than normal tissue. In the case of the Rous chicken sarcoma, the introduction of diatomaceous earth with the tumor or filtrate resulted in a greater percentage of "takes" than when the tumor alone was inoculated.

Attention is called to the recent investigations on heredity in cancer. The experiments of Tyzzer and of Maud Slye are of particular interest. Tyzzer[25] noted in earlier experiments that a tumor which grew very readily in Japanese waltzing mice failed to grow in the common mouse. When the waltzing mouse and the common white mouse were bred together, the hybrids of the first generation proved to be more susceptible than the waltzing mice. The offspring of such mice, however, proved entirely insusceptible to tumor inoculation.

Maud Slye[26] found that the incidence of spontaneous tumors is influenced by heredity and that the power to resist cancer is a dominant characteristic which could be bred in or out of different strains of mice. Tumors appeared as any other characteristic would and followed the Mendelian law.

This brief review will serve to indicate that substantial progress has been made in the field of pathology and bacteriology. The new technical procedures of Noguchi, Rosenow, Smith and others have already revealed the cause of many obscure conditions and their continued application will undoubtedly uncover others. That pneumonia is a contagious disease is a conception in accord with the observations of Strong and Teague on the pneumonic form of plague which was so prevalent in Manchuria a few years ago.

Of greater importance are the results of the experimental investigation of tumors. The fact that nematode worms are frequently found associated with neoplasms such as the gastric carcinoma of rats and tumors of the bladder and rectum in cases of bilharzia would appear to point to the parasitic origin of certain tumors. The Rous chicken sarcoma, apparently due to a filterable virus or an enzyme, is perhaps the first of a new group of malignant tumors. Chronic irritation, illustrated by the X-rays and the kangri pot of the natives of Kashmir, also induces another type of malignant growth. All these facts would seem to demonstrate that it is no longer possible to regard the various forms of tumors as having a common etiology and that we may be forced to assign to different groups of tumors a different cause. The old idea that cancer is not hereditary is no longer tenable for extensive experiments on mice would seem to prove quite the contrary, unless the same laws of heredity in the case of mice will not apply to man.

Ellis Kellert.

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Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, MARCH, 1916.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	35
Typhoid fever	0
Scarlet fever	0
Measles	8
Whooping cough	2
Diphtheria and croup	2
Grippe	3
Diarrheal diseases	4
Apoplexy	15
Pneumonia	16
Broncho-pneumonia	7
Bright's disease	8
Cancer	9
Accidents and violence	15
Deaths under one year	16
Deaths over seventy years	34
Death rate	22.04
Death rate less non-residents	18.30

Deaths in Institutions.	Non-Resident.	Resident.
Albany penitentiary	1	0
Sacred Heart Convent	0	1
Old Ladies' Home	0	1
Home for the Aged	0	1
Public places	4	3
Hospital for Incurables	1	3
Federation of Labor Camp	1	0
St. Peter's Hospital	5	4
Maternity Hospital	1	2
Albany Hospital	10	9
Albany Hospital Camp	1	8
Homeopathic Hospital	3	9
Albany County Hospital	3	5
Child's Hospital	0	1
St. Margaret's House	3	0
	33	47

Births	193
Still births	7

Bureau of Communicable Disease.

Cases Reported.

Typhoid fever	7
Scarlet fever	20
Diphtheria and croup	9
Chickenpox	24
Measles	475
Whooping-cough	36
Tuberculosis	41
Mumps	101
Septic sore throat	18
Cerebrospinal meningitis	1
Total	732

Number of days quarantine for scarlet fever:
Longest...... 37 Shortest...... 30 Average...... 32 5/12
Number of days quarantine for diphtheria:
Longest...... 45 Shortest...... 5 Average...... 22 1/8
Fumigations:
Houses.................. 285 Rooms.................. 1045
Milk bottles disinfected.................. 984

Communicable Disease in Relation to Schools.

	Reported		
	D.	S. F.	M.
Public School No. 1	..	..	8
Public School No. 2	..	..	3
Public School No. 3	..	..	2
Public School No. 4	..	..	22
Public School No. 5	..	1	1
Public School No. 6	..	..	3
Public School No. 7	..	..	1
Public School No. 8	..	2	3
Public School No. 9	..	..	9
Public School No. 10	..	..	4
Public School No. 12	..	1	5
Public School No. 14	..	1	4
Public School No. 15	..	1	11
Public School No. 16	..	2	4
Public School No. 17	..	1	9
Public School No. 18	1	..	2
Public School No. 21	..	..	35
Public School No. 24	..	1	22
Miss Quinn's School	..	..	1
High School	..	..	1

N. Y. S. Normal School	..	..	1
Albany Boys' Academy	..	..	9
Albany Female Academy	2	..	1
St. Agnes School	..	..	1
Holy Cross School	..	..	1
St. Joseph's School	..	..	10
Lady Help of Christians	..	1	..
St. Patrick's Institute	..	..	9
Cathedral School	1	..	12
Lady of Angels School	..	..	1
St. Ann's School	..	..	2
St. Mary's School	..	..	3
St. Casimir's School	..	..	8

Tuberculosis.

Living cases on record March 1, 1916		483
Cases reported:		
By card	30	
Dead cases by certificate	11	
		41
		524
Dead cases previously reported	23	
Dead cases not previously reported	11	
		34
Living cases on record April 1, 1916		490
Total tuberculosis death certificates filed during March, 1916		34
Non-resident deaths:		
Albany Hospital	1	
Albany Hospital Camp	1	
C. F. L. Pavilion	1	
Albany County Penitentiary	1	
Homeopathic Hospital	1	
St. Margaret's House	1	
Resident deaths		28

Report of Visiting Tuberculosis Nurse.

Old cases	0
New cases	31
Returned from hospitals	8
Total	39

Disposition of cases:

Died	8
Sent to hospitals	8
To general tuberculosis nurse	21
Remaining under treatment	2
	39
Visits made (old cases)	225
Visits, made, new patients	44
Calls at B. of H. office	26

BENDER LABORATORY REPORT.

Diphtheria.

Initial positive	18
Initial negative	269
Release positive	25
Release negative	87
Suspicious	4
Total	403

Test of Sputum for Tuberculosis.

Positive	14
Negative	48
	62

Widals.

Positive	7
Negative	16
Suspicious	7
Unsatisfactory	1
	31

Wassermann tests	102
Milk analyses	26
Pathological meat examinations	2

BUREAU OF NUISANCES.

Complaints made	58
Privy vaults	2
Closets	7
Plumbing	8
Drain	2
Water	9

Gas	1
Filthy yard	2
Filthy alley	1
Filthy premises	1
Chicken	2
Goose	1
Dog	5
Garbage	6
Soft coal	1
Smoke	1
Odor	2
Noise	1
Stable	1
Unclassified	5
Inspections	63
Plumbing	50
Sanitary	13
Reinspections	54
Plumbing	32
Sanitary	22

HEARINGS.

Cases heard before health officer	5
Nature of cases:	
Hopper closet	1
Plumbing	3
Garbage	1
Disposition of cases:	
Abated	5

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	211
Old houses	78
New houses	133
Iron drains	39
Connection street sewers	7
Tile drains	7
Urinals	37
Cesspools	68
Wash basins	126
Sinks	74
Bath tubs	55
Washtrays	48
Butler's sinks	1
Tank closets	172

Permits issued	71
Plumbing	53
Building	18
Plans submitted	36
Old buildings	23
New buildings	15
Houses tested	41
Peppermint	5
Water tests	36
Houses examined	33
Re-examined	79
Valid	17
Without cause	16
Violations	3

BUREAU OF DEAD ANIMALS.

Animals removed from first precinct	24
Animals removed from second precinct	27
Animals removed from third precinct	17
Animals removed from fourth precinct	11
Animals removed from fifth precinct	19
Kennel cats removed	236
Kennel dogs removed	192
Total	526

Horses removed	28
Dogs removed	213
Cats removed	284
Rats removed	1
Total	526

BUREAU OF MARKETS AND MILK.

Public market inspections	6
Market inspections	34
Fish market inspections	2
Fish peddler inspections	1
Packing house inspections	1
Milk depots inspected	12
Stores inspected	137
Milk cans inspected	160
Lactometer readings	145
Temperature readings	145
Fat tests	74

Sediment tests	60
Bacterial counts	35
Special bacterial examinations	6
Complaints investigated	2

MISCELLANEOUS.

Work certificates issued to children	28
Vaccinations	11
Cases assigned to health physicians	97
Calls made	208
Garbage collected from first district (barrels)	207
Garbage collected from second district (barrels)	211

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR MARCH, 1916.—Number of new cases, 176; classified as follows: Dispensary patients receiving home care, 6; district cases reported by health physicians, 1; charity cases reported by other physicians, 82; moderate income patients, 59; metropolitan patients, 28; old cases still under treatment, 492; total number of cases under nursing care during month, 668. Classification of diseases for the new cases: Medical, 24; surgical, 8; gynecological, 7; obstetrical under professional care, mothers 33, infants 33; eye and ear, 1; skin, 0; throat and nose, 0; dental, 0; infectious diseases in the medical list, 69; surgical list, 1. Disposition: Removed to hospitals, 21; deaths, 20; discharged cured, 67; improved, 20; unimproved, 5; number of patients still remaining under care, 535.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 3; students in attendance, 2; nurses, 3; patients carried over from last month, 2; new patients during month, 7; patients discharged, 5; visits by head obstetrician, 0; attending obstetrician, 43; students, 40; nurses, 73; total number of visits for this department, 156.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,208; for professional supervision of convalescents, 662; total number of visits, 1,870; pay visits, 621; charity visits, 587; unrecorded visits, 662; cases reported to the guild by 1 health physician, and 46 other physicians; graduate nurses 8, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 78; new patients, 154; old patients, 500; total number of patients treated during month, 654. Classification of clinics held: Surgical, 12; nose and throat, 8; eye and ear, 14; skin and genito-urinary, 7; medical, 8; lung, 7; dental, 0; nervous, 2; children, 12; gynecological, 8.

ALUMNI ASSOCIATION, ALBANY MEDICAL COLLEGE.—The annual meeting of the Alumni Association of the Albany Medical College will be held on June 9th, 1916. The complete program will soon be published.

PUBLIC HEALTH COURSE, ALBANY MEDICAL COLLEGE.—The Albany Medical College announces that the following lectures were delivered during the month of April: "The Social Influence of Mental Defects," Robert W. Hill, Superintendent, Department of State and Alien Poor, State Board of Charities; "Mechanical Equipment of State Institutions," George B. Nichols, Chief Engineer, State Department of Architecture; "Vital Statistics," Dr. Cressy L. Wilbur, Director, Division of Vital Statistics, State Department of Health; "Medical Expert Testimony," Hon. Alden Chester, Justice of the Supreme Court.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The regular monthly meeting of the Medical Society of the County of Albany was held at the Elks Club, Thursday, March 23, 1916, at 8.45 P. M. A Symposium on Headache was presented: Neurological, Dr. LaSalle Archambault; general medical, Dr. James F. Rooney; ocular, Dr. Arthur J. Bedell.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held in its rooms in the New County Building, Tuesday, April 11, 1916, at 8.30 P. M. Dr. I. Harris Levy read a paper on "The Diagnosis of Diseases of the Gastrointestinal Tract," illustrated by X-ray slides.

ALBANY HOSPITAL.—A clinical meeting was held in the amphitheater of the Albany Hospital on Tuesday, March 28th, 1916, at 8.30 P. M. Subject—Involution Period of Life.

Drs. Elting, Sampson, Ordway, Kellert and Bedell spoke on their various special lines. Dr. Heslin presented a case of general arteriosclerosis diagnosed from the eye symptoms.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The regular annual meeting of the Medical Society of the State of New York will be held on May 16, 1916, at 11 A. M. at the Casino Building, Saratoga Springs, N. Y.

AMERICAN MEDICAL ASSOCIATION.—The annual meeting of the American Medical Association will be held at Detroit, Michigan, June 12-16.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.—The annual meeting of the American Ophthalmological Society will be held at the Shoreham Hotel, Washington, D. C., May 9th and 10th, 1916.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.—The tenth annual meeting of the Congress of American Physicians and Surgeons will be held in Washington, D. C., May 9th and 10th, 1916.

Tuesday, May 9th, at 2.30 P. M., the Congress will be opened by the president. Subject to be considered: "Syphilis." Papers will be read as follows, viz.: by Dr. J. A. Fordyce, New York, on "The Diagnosis and General Treatment of Syphilis;" Dr. Homer F. Swift, New York, on "The Treatment of Cerebro-Spinal Syphilis;" Dr. Hugh Cabot, Boston, on "Syphilis and Society;" Dr. W. S. Thayer, Baltimore, president of the Congress gave his address at 8 P. M.

Wednesday, May 10, 1916. Subject to be considered: "Immunization and Its Practical Applications." Papers will be read as follows, viz.: Dr. Theobald Smith, of Princeton, on "The Underlying Problems of Immunization;" Dr. Ludwig Hektoen, Chicago, on "Vaccine Therapy;" Dr. W. H. Park, New York, on "Serum Therapy."

MEETING OF THE AMERICAN ACADEMY OF MEDICINE.—The forty-first annual meeting of the American Academy of Medicine will be held at the Hotel Statler, Detroit, Michigan, June 9-12, 1916.

AMERICAN PROCTOLOGIC SOCIETY.—The eighteenth annual meeting of the American Proctologic Society will be held in Detroit, Michigan, June 12th and 13th, 1916.

MEDICO-PSYCHOLOGISTS MEET.—The seventy-second annual meeting of the American Medico-Psychological Association was held at New Orleans, April 4, 1916.

BUREAU OF HEALTH OF THE CITY OF ALBANY.—The Bureau of Health of the city of Albany has a contract with the Bender Laboratory to do all bacteriological, pathological, biological examinations and chemical tests as may be required by the Bureau of Health. Under this contract, the Bender Laboratory is now prepared to make the following examinations for which outfits have been provided. Wasserman, Widal, Sputum and Diphtheria. Collections of specimens will be made daily at seven P. M.

SARATOGA SPRINGS RESERVATION.—It has been decided to place the minerals springs at Saratoga under the supervision of the State Conservation Commission.

Medical Corps for the United States Navy.—The next examination for admission into the medical corps of the Navy will be held on or about June 16, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash.

The applicant must be a citizen of the United States, between 21 and 20 years of age, a graduate of a reputable school of medicine, and must apply for permission to appear before a board of medical examiners. The application must be in the handwriting of the applicant, and must be accompanied by the following certificates:
testifying from personal knowledge to good habits and moral character.

(a) Letters or certificates from two or more persons of good repute,

(b) A certificate to the effect that the applicant is a citizen of the United States.

(c) Certificate of preliminary education. The candidate must submit a certificate of graduation from an accepted high school or an acceptable equivalent.

(d) Certificate of medical education. This certificate should give the name of the school and the date of graduation.

(e) If the candidate has had hospital service or special educational or professional advantages, certificates to this effect, signed by the proper authorities, should also be forwarded.

Application should reach the Bureau of Medicine and Surgery not later than June 5, 1916.

Successful candidates are appointed assistant surgeons in the medical reserve corps, and if so recommended are subsequently assigned to duty, with full pay and allowances, in attendance upon a course of instruction at the Naval Medical School, Washington, D. C. This course begins annually about October first and lasts about six months. Upon the completion thereof the student officers are given their final examination and, if found qualified, are commissioned as assistant surgeons in the regular medical corps of the navy.

Assistant surgeons are examined for promotion at the expiration of three years' service, and, if successful, become passed assistant surgeons. Promotions to the higher grades are made in the order of seniority to fill vacancies as they are created (by resignation, retirement, or death), and for each promotion a physical and professional examination is required by law.

The pay of an assistant surgeon is $2,000 per year on shore duty, and $2,200 at sea. At the expiration of the three years mentioned in the preceding paragraph, if successful in passing the examination for the rank of passed assistant surgeon, pay on shore is $2,400; at sea, $2,640. After a total of five years in the service, pay on shore is $2,640; at sea, $2,904. Both at sea and on shore, quarters or their equivalent are provided; if these are not available on shore duty, an ample, appropriate allowance is provided for rental, heat, and light of same. An allowance of eight cents a mile is also provided when traveling on orders.

Full information with regard to physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.

EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON, TREASURY DEPARTMENT.—United States Public Health Service. Boards will be convened at the Bureau of Public Health Service, 3 "B" street, S. E., Washington, D. C., and at a number of the marine hospitals of the service, on Wednesday, May 31, 1916, at 10 o'clock A. M., for the purpose of examining candidates for admission to the grade of assistant surgeon in the public health service.

The candidate must be between 23 and 32 years of age, a graduate of a reputable medical college, and must furnish testimonials from two responsible persons as to his professional and moral character, together with a recent photograph of himself. Credit will be given in the examination for service in hospitals for the insane, experience in the detection of mental diseases, and in any other particular line of professional work. Candidates must have had one year's hospital experience or two years' professional work.

Candidates must be not less than 5 feet, 4 inches, nor more than 6 feet, 2 inches, in height, with relatively corresponding weights.

The following is the order of examination: 1, physical; 2, oral; 3, written; 4, clinical.

Candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

Examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise covers the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Passed assistant surgeons after twelve years' service are entitled to examination for promotion to the grade of surgeon.

Assistant surgeons receive $2,000, passed assistant surgeons $2,400, surgeons $3,000, senior surgeons $3,500, and assistant surgeon-generals

$4,000 a year. When quarters are not provided, commutation at the rate of $30, $40, and $50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent in addition to the regular salary for every five years up to 40 per cent after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address Surgeon-General, Public Health Service, Washington, D. C.

PERSONALS.—Dr. E. RAYMOND SCHILLING (A. M. C. '15), is located at 374 Madison avenue, Albany, having taken the practice of the late Dr. James M. Moore.

DIED.—Dr. DAVID F. ALSDORF (A. M. C '55), for many years a practitioner of Corunna, Mich., died at Guthrie, February 15, 1916, aged 83.

—Dr. JAMES M. MOORE (A. M. C. '94), of Albany. died at his home March 21, 1916, from pneumonia, at the age of forty-three years.

—Dr. AXEL F. SWANSON (A. M. C. '13), died at Southampton. Mass., March 20, 1916. aged 24 years.

In Memoriam

JAMES MANNING MOORE, M. D.

Dr. JAMES MANNING MOORE of the class of 1894 of the Albany Medical College died at his home, 374 Madison avenue, Albany, on the evening of March 21st, 1916.

The immediate cause of death was grip-pneumonia. but it is assumed that Dr. Moore precipitated the fatal result by indifference to the symptoms, for with his customary vigor and activity he attended to the numerous calls of his practice in unfavorable weather after the symptoms of the disease had appeared.

There were certain personal characteristics of Dr. Moore which spoke highly for his sense of professional obligation, and this devotion to the calls of practice had become such an intimate part of his nature that he failed to recognize the need of restraining his activities, even when it became difficult for him to engage in work. He began practice in Albany in 1895, and immediately entered upon a most active career. He was especially noted for his disregard of pecuniary remuneration and answered the calls of the poor without question. His patients became so numerous he had no time for diversion, and night and day were spent in rapid visitation from one house to another.

Dr. Moore was born in Albany September 17, 1872, the son of Dr. Levi Moore, a well known practitioner, and Ida Ferguson Moore His maternal grandfather, Dr. John Ferguson, practiced in Albany and his office was in the immediate neighborhood of the one occupied by Dr. Moore at the time of his death. After graduating from the Albany

Medical College, Dr. Moore became resident physician at the McKeesport Hospital, McKeesport, Pa. For several years he was a lecturer on physical diagnosis in the college. He was a member of the State and county medical societies. He was also a member of Master Lodge of Albany. Dr. Moore is survived by his wife and three children, and also by four brothers and three sisters.

SANFORD BASSLER, M. D.

Dr. Bassler died at his home in Berne, N. Y., on January 13, 1916, following a long illness.

Dr. Bassler was born in the town of Knox, Albany county, September 16, 1865. He was the son of Lavinus and Katherine Weidman Bassler, of Schoharie county. The doctor was a descendant of one of the oldest families in America, tracing his ancestry to the first settlers here. He graduated from the Albany Medical College in the class of 1896. After a few months he married Miss Emma M. Wood of Middleburg and moved to Joliet, Ill., to take up the practice of his chosen profession. He enjoyed a large and lucrative practice there. He was a member of many lodges in fraternal orders, and was examining physician for many orders.

In May, 1906, Dr. Bassler was taken ill and finally removed to a hospital at Joliet, where he lingered between life and death for several months, but improved enough to be operated upon for abscess in the base of the lungs in July of the same year.

In the fall of 1906 Dr. Bassler came east; in the early part of 1907 he and his wife went to Texas. His health was such that for three years he went east, south and west. On May 1, 1911, he came east to stay. In January, 1914, Dr. Bassler began another decline in health, and later suffered a general breakdown from which he never recovered.

In character, Dr. Bassler was a man of refinement, one held in high esteem by all who knew him. His untiring efforts to prove himself of some value to the sick and afflicted, whenever and wherever occasion required, did much to hasten his own affliction and bring on a disease to himself by exposure to rains, cold weather and night work, until the strong self-made man fell a victim. That caused his death, while he was still young and with a bright future in store for him.

Dr. Bassler labored with one end in view: Better to give of what you have and possess while life is yours, than to close up in a bushel. Thus, with his untiring efforts for suffering humanity, we can only say: "He fought a good fight. The battle is won and victory is his." Triumphant in a golden crown that God alone gave him when He claimed him as His own, Dr. Bassler was buried January 15, 1916, under the rites of the Masonic order, of which he was a prominent member. Interment was at Wood family plot at Middleburg. Dr. Bassler leaves a widow and father as his surviving relatives.

W. E. DEITZ.

David F. Alsdorf, M. D.

Dr. David F. Alsdorf of the class of 1855 of the Albany Medical College died at the home of his son in Guthrie, Okla., February 15, 1916, aged 83.

Dr. Alsdorf was one of the oldest survivors of the Alumni of the Albany Medical College. Dr. Harmon A. Buck of Burlington, Vt., a classmate of Dr. Alsdorf, is alive, and Dr. S. S. Hance of the class of '54 reported by letter at the Alumni meeting of 1915, stating his age to be ninety years.

Dr. Alsdorf wrote for the meeting of 1915 the following account of his life:

"I would be pleased to meet with survivors of class of '55 but am 82 years old and have not been able to travel for the last two years. Spring of '56 located in Corunna, Mich. Was in general practice there for twenty-five years and worked hard. Was examining surgeon in Provo office during war, pension examiner twenty years, city clerk several years, city assessor several years and examiner for New York Life and several other companies. Went into the drug business in 1867, sold out in 1883, and practically gave up all business except for few old friends. Came here in 1892 and have done nothing but loan a little money and exist on interest. I am pretty near alone in the world. Have one son in business here, a bachelor of forty-eight. The government has paid me over eight thousand dollars for examinations and I have attended over twelve hundred obstetric cases."

Current Medical Literature

PATHOLOGY AND BACTERIOLOGY

Edited by Ellis Kellert, M. D.

The Etiology of Scarlet Fever (A Preliminary Report).

F. B. Mallory and E. M. Medlar. *The Journal of Medical Research, March,* 1916.

The investigation began with the discovery of masses of Gram-positive bacilli in the fibrino-purulent exudate within the crypts of the tonsils from a child dying of scarlet fever. Streptococci were also abundant. Typical bacilli were present on the surface of the tonsil and in small erosions of the tonsillar epithelium. It appeared that the bacilli penetrated between the epithelial cells destroying them.

Similar masses of bacilli were found in the trachea and in the lung in areas of broncho-pneumonia. The reaction is characterized by serum, polynuclear leucocytes and very litle fibrin. In other cases of scarlet fever similar organisms were found.

Mallory believes that scarlet fever may be due to this organism which he names the B. scarletinae. It is strongly Gram-positive. pleomorphic and frequently arranged somewhat like diphtheria bacilli. It is a facultative aerobe and grows best on serum-glycerine-dextrose-agar. The gross lesions produced are inconspicuous but the destruction of tissue permits secondary streptococcus infection.

VOL. XXXVII JUNE, 1916 No. 7

ALBANY MEDICAL ANNALS

Original Communications

MEDICAL EXPERT TESTIMONY.

An Address delivered before the students of the Albany Law School and the Albany Medical College of Union University at the Auditorium of the Education Building, Albany, N. Y., on April 19, 1916,

BY ALDEN CHESTER,
Justice of the Supreme Court of New York

GENTLEMEN OF THE LAW SCHOOL AND OF THE MEDICAL COLLEGE:

The subject of Medical Expert Testimony, which I purpose to bring to your attention during the time allotted to me, is one that has been discussed by physicians, lawyers, judges and reformers during the entire growth of our present system of trials of questions of fact in courts of justice. I cannot hope to add anything that is new to this discussion. Little is ordinarily said about it in the usual course of instruction laid out for medical students or law students. Yet it is a matter that is worthy of their serious thought and attention.

Before witnesses are permitted to testify they are required to solemnly swear that they will tell the truth, the whole truth and nothing but the truth and ordinarily they are not allowed to testify to anything but facts within their personal knowledge nor to draw conclusions or inferences, for this would usurp the province of the court and jury.

But there are many exceptions to this rule and one of these permits the testimony of experts, who are summoned for the purpose of enlightening the court and jury on technical or scientific questions. These expert witnesses are allowed to express their opinions, stating the facts or the reasoning upon which their opinions are based. They are required to take the same oath that other witnesses do, to tell the truth, the whole truth and nothing but the truth and therefore courts and juries have the right to expect that the opinions given shall be *honest* ones.

The expert is presumed to possess peculiar skill concerning the special subject about which he testifies arising from his study, experience and observation in relation thereto, and therefore he is permitted to give his opinions to aid the court and jury, who are not presumed to have such skill, in determining the matter in controversy.

But when physicians are called as experts on opposite sides of a case, their conflicting views more often lead to darkness than to light. A quaint philosopher has said: " Some folks know a great many things that ain't so." Some of these so-called experts, by their persistency in asserting things that do not appeal to the average intelligence as true, have given much emphasis to that sort of philosophy. Every judge and lawyer of experience has frequently observed how the practical common sense of an intelligent jury has correctly solved problems concerning which learned and experienced experts had asserted contrary conclusions.

The late N. C. Moak, an eminent lawyer of this city, said in a paper read before the New York State Bar Association, that " the testimony of an expert is valuable only so far as, from a *superior* knowledge of the matter under consideration, he *fairly* and *honestly* throws light upon the results sought to be reached, from such superior knowledge. If he does not in fact possess it, or if, from bias, desire to sustain his professional reputation, or the interest of the party calling him, a wish to sustain a particular theory as against a counter theory, or from any other cause, he does not fairly and honestly give the result of an intelligent observation and experience, his testimony may be valueless or even fraudulent." (Proceedings N. Y. Bar Assn., Vol. 5, 1881, p. 142.)

These views are not entertained by lawyers alone. An eminent physician and specialist, under whose teachings it was my privilee to sit while I was a student and while he was the professor of Medical Jurisprudence at the Columbia College Law School, the late Dr. John Ordroneaux, in an article published in the *American Journal of Insanity*, said:

"If science, for a consideration, can be induced to prove anything which a party litigant needs in order to sustain his side of the issue, then science is fairly open to the charge of venality and perjury, rendered the more base by the disguise of natural truth in which she robes herself. In fact the calling of experts has now come to be regarded as the signal for the display of forensic pyrotechnics, beneath whose smoke and lurid glare, law, common sense and unalloyed justice are swept away in the whirlwind of muddy metaphysics. (9 *Albany Law Journal, 122.*)

It has become proverbial that "doctors disagree," but when we consider that a large part of what is called medical science is based only upon theory, it is not strange that medical experts differ so widely in their opinions upon so many subjects.

On questions of mental unsoundness and psychological medicine and some other subjects, there is room for honest differences of opinions, even among the ablest and most experienced experts, but toxicology has become relatively an exact science and affords no occasion for differences of opinion, except that arising from ignorance. Yet in cases of alleged homicides by poisoning or in other cases involving poisons, experts in their testimony differ quite as widely as in respect to other matters in their efforts to support the theories of those who employ them.

The venerable and distinguished Dr. Charles W. Eliot, President Emeritus of Harvard University, said in a recent address before the Massachusetts Bar Association (25 Green Bag, 65): "The responsibility of the medical profession in regard to the plea of insanity in criminal cases is heavy. Members of the profession are largely responsible for giving so-called expert testimony which goes beyond the limits of present knowledge concerning mental disease, and for inventing exculpatory terms, such as 'brain storm' for instance, which are mere verbal insinuations drawn from obscure regions where facts are few and theories vague. In these shadowy regions it is easy to procure opposing or indeed, contradictory medical opinions in great abundance and unscrupulous lawyers are all too ready to avail themselves of such facilities. * * * It should be said, however, in defense of the alienists—the class of medical experts whose testimony oftenest excites the public's criticism—that the amount of expert testimony on insanity is very small compared with the great mass of medical testimony in cases arising from personal injury, and that the proportion of defective or rash testimony is smaller among the alienists who are specialists, than among the general practitioners who appear in the personal injury cases."

In this last class of cases large fees and often large contingent fees, depending upon the result of the litigation cannot fail to have a marked influence upon the truthfulness and the value of the testimony of the medical expert. Such fees prompt them to forget their obligations as witnesses and to put them in the class with the paid advocates in the cases.

It has been forcefully and truthfully said that, "There is a manifest difference between a hired legal champion and a hired witness who testifies to order. The one is necessary and blameless, the other is a disgrace to jurisprudence and a hindrance to justice." (Irving Brown, 10 Green Bag, 548.)

It is not strange therefore that courts and juries as well as many others have come to regard the testimony of professional experts as entitled to little, if any, weight. (Wharton on Ev., § 454.)

The law reports are filled with many expressions in support of this view. Numerous authorities could be cited, but brief extracts will be given from the opinions in only three widely separated cases.

In the Tracy Peerage case in England (10 Cl. & Fin., 154, 191) Lord Campbell said that "skilled witnesses came with such a bias on their minds to support the cause in which they are embarked that hardly any weight should be given to their evidence."

In a case in California (Grigsby vs. Clear Lake Water Co., 40 Cal., 396, 405) the Court said: "It must be painfully evident to every practitioner, that these witnesses are generally but adroit advocates of the theory upon which the party calling them relies, rather than impartial experts, upon whose superior judgment and learning the jury can safely rely."

The late Judge Rufus W. Peckham, in writing the opinion in a case in the Court of Appeals in New York (Roberts vs. N. Y.

Elevated R. R., 128 N. Y. 455), said: "Expert evidence, so called, or in other words, evidence of the mere opinion of witnesses, has been used to such an extent that the evidence given by them has come to be looked upon with great suspicion by both courts and juries and the fact has become very plain that in any case where opinion evidence is admissible, the particular kind of an opinion desired by any party to the investigation can be readily procured by paying the market price therefor. * * * The expert comes on the stand to swear in favor of the party calling him, and it may be said, he always justifies by his works the faith that has been placed in him."

It is fair to say that these statements related to experts generally and not to medical experts alone.

The question has been much discussed, as to the best method to correct the abuses which have grown up. Reformers in both the legal and the medical profession have given serious thought to the matter. Attempts have been made in some of our sister States and in some foreign countries, by legislation to remedy the existing evils, but these attempts have not brought a very great measure of relief. For this reason I will not review this legislation. Brief reference will be made, however, to some comparatively recent efforts to procure legislation in this State on the subject.

At a meeting of the State Bar Association held in 1908 the then president of the Association, Hon. Joseph H. Choate, presented a number of letters which he had received from judges, members of the bar and from various organizations, calling attention to the scandals existing with respect to medical expert testimony. At his suggestion a committee was appointed with Judge Alphonzo T. Clearwater of Kingston as Chairman, to consider the matter and report at a subsequent meeting. The committee reported at the meeting of the Association held in Buffalo in January, 1909. Before making the report the Committee had made an exhaustive study of the subject. It had corresponded with the Attorneys General and with the judges of the Appellate Court of every State in the Union, with the officers of the Crown in England and with those of her Colonial dependencies. It invited the co-operation of the New York State Medical Society of the Allopathic school, of the Homeopathic Medical Society of the State, of the New York Academy of Medicine and of the Society of Medical Jurisprudence, all of whom joined with the committee in recommending to the Legislature the passage of a bill which the committee had prepared.

The bill provided for the designation by the justices of the Supreme Court assigned to the Appellate Divisions in the several Departments of at least ten and not more than sixty, later increased to one hundred, physicians in each judicial district who may be called as medical expert witnesses by the trial court or by any party to a civil or criminal action in any of the courts of the State, to be paid by the treasurer of the county in which the trial is had, for their services and attendance, such sums as the presiding judge shall allow. The bill was not to be construed as limiting the right of the parties to call other expert witnesses.

Although the bill was pressed upon the Legislature by a strong committee representing every judicial district in the State it failed to receive favorable action in the Senate and passed the Assembly only after the provision relating to civil actions was eliminated.

In 1910 the bill was again before the Legislature. On the hearing before the Judiciary Committee of the Senate, as stated by Judge Clearwater in his subsequent report to the State Bar Association, " the objection was raised that the passage of the Act would aid in creating a ' doctors' trust,' which at that time was disturbing the perfervid imagination of those hysterical people who always are on the alert to discover phantoms and ever zealous and noisy in annihilating specters of their own creation." Whether it was for the reasons so forcibly stated by Judge Clearwater or not the bill again failed in the upper house. It was presented a third time the next year and met a like fate, since which time, according to its friends, " it has slept the sleep of the just." Whether it will ever have a resurrection or a new birth remains to be seen. I am not one of those who mourned its untimely death overmuch, for I never could be made to believe it would accomplish what its friends claimed for it in the way of reform.

As a result of the agitation for the passage of the bill I have referred to, and fostered by its friends, the Legislature a year ago last winter passed a bill which I think was good as far as it went. (Laws 1915, Ch. 295.) It relates solely to the question of the soundness of mind of the person involved.

That law provides that in a criminal action or proceeding or in a proceeding instituted by a writ of habeas corpus or certiorari to inquire into the cause of detention, in which the soundness of mind of a person is in issue, the court or justice may appoint not more than three disinterested competent physicians to examine such person as to his soundness of mind at the time of the examination. Any such examining physician may be sworn as a witness at the instance of any party to the action or proceeding and his compensation for making such examination and testifying, when certified by the justice or court making the appointment, shall be paid out of any funds available for court expenses.

So that now in a case where a person is charged with a crime and the defense of insanity is interposed, or where a person is confined as an insane person and there is an inquiry into the cause of detention, the court where the action or proceeding is pending, may appoint this limited number of physicians to make the examination indicated who may be sworn as witnesses at the instance of any party to any such action or proceeding and at the public expense.

It will therefore be seen that we are left now where we always have been with respect to all criminal actions where the question of unsoundness of mind is not involved and with respect to all civil actions, which include the vast number of personal injury cases constantly pressing themselves upon the attention of the courts. Nor is it at all likely that in view of the recent agitation of the matter in the Legislature, any relief from that source may be expected very soon, especially along the lines suggested by the bill prepared by the State Bar Association.

If I was to suggest the legislation which in my opinion would be much more effective than that recently proposed, in preventing the present abuses, it would be a law which would limit the calling of expert witnesses to *three* on a side and which would permit the justice presiding at the trial, in his discretion, to call in addition one disinterested expert witness at the public expense. This suggestion, it is fair to say, is not original with me, nor is it altogether an experiment, for it has, in substance, been incorporated into the law of our neighboring Province of Ontario and has, as I am advised, worked well.

The great advantage of such a law would be, I believe, to make the expert witnesses called by the parties less likely to give dishonest or biased opinions in favor of the party who employs them, for they would know that the court would have the power to bring in a disinterested expert who would have no motive, except to give an honest and unbiased judgment as to the question involved and who would be permitted to demonstrate to the court and jury or at least to try to do so, the fallacy in the opinions given by the other experts. I once heard a politician of some prominence say in a public address, that he had always made it a principle of his life never to tell a lie—when there was any danger of getting caught at it.

The law which I approve would make the dishonest expert witness, working for pay, adopt that principle of moral philosophy in many if not in most cases and it would afford the means of exposing and humiliating those who did not adopt it. Such a law would also destroy the avocation of many expert witnesses who are devoid of conscience and who have been largely responsible for the present feeling against them.

I would by no means have you think that I believe physicians as a class are subject to the criticisms I have made, for a great proportion of the men of that profession would not permit themselves to be employed as medical experts, to give evidence contrary to their convictions. But the medical profession like the legal profession, I am sorry to say, has a sufficient number of unworthy members, who are influenced more by sordid reasons than by a sound conscience and who permit themselves to be used in such a way as not only to discredit themselves but to tend to bring the honorable profession to which they have been admitted into disrepute.

Nor would I have you think that all differences of opinion among medical expert witnesses are dishonest differences for those of the highest character and integrity might well, and often do differ with respect to matters that cannot in the nature of things be definitely known.

While there have been marvelous advances made in medicine and especially in surgery, in recent years, yet it can hardly be claimed for either that it is an exact science. The average physician or surgeon may not like to concede the fact but he well knows that in many cases "diagnosis is little more than a guess, enlightened by experience." Notwithstanding this, it is a matter of almost daily experience in the courts in the trial of cases where damages for personal injury are sought, for the medical expert employed by the plaintiff to swear that he can state with reasonable certainty that the injuries are permanent, while the expert employed by the defendant in the same case will assert with like certainty that the plaintiff will fully recover in a short time. These diverse opinions will be testified to in a case where the court and the jury can readily see that the chances of complete recovery or of permanent impairment may depend upon unknown causes and contingencies which cannot be foreseen.

It is apparent that neither the reformers in the legal profession nor in the medical profession have yet found a remedy for the conditions which I have referred to, which the Legislature is willing to enact into law.

For that reason we must go on for the present under the system we now have. Because of this fact I have thought it proper at this time, after a somewhat extended experience in presiding over the trial of cases involving medical evidence, to make a few simple observations which I think will, if heeded, give the evidence of an honest expert greater weight and make it more valuable to those who employ him and more beneficial as an aid in the administration of justice, than it has heretofore been in many cases. To address these suggestions to physicians of large experience might seem to be a piece of supererogation, but when addressed to a class of medical students, who may some day, as years and experience come to them, find themselves profitably employed as expert witnesses, I hope they may prove of some value.

First. Do not permit yourselves to be employed in a case where you will be expected to testify to opinions that are not the honest convictions which you entertain after a careful examination and study of the subject in hand. Reject all appeals for testimony that is not in harmony with your judgment. Do not permit pay or the hope of reward to influence your conscience. Remember at all times that character is worth more than cash. In the long run, the physician whose opinions cannot be bought and who comes to have that reputation in the community where he lives, will be most sought after and will command better compensation than any of the other type of experts. The mendacious physician who is willing to sell his judgment to the ambulance chasing lawyer for a contingent fee to aid him in an effort to " put one over " on the court, and jury, in cases having no merit, soon finds his level and the public soon learns to value him at his actual worth. There is no type of expert where honesty forms a better asset than in the physician. Outside of his professional training it is his best capital and no enduring success can be attained without it.

In a case that I once heard of, large compensation was offered to a physician to testify to matters which did not meet the approval of his conscience. He was so offended at the request to testify that he volunteered to give his testimony to the other side.

When the lawyer came to cross-examine him he foolishly asked, " When you swore as you have, did you remember you were under oath ? "

" No danger of my forgetting that," replied the witness, " I am telling the truth for nothing when I could have had $100 for lying for your side, and you know it."

Second. Do not testify for a person who you believe is malingering—who feigns that he is suffering from injuries which he has not received or who exaggerates slight and curable injuries and claims that they constitute permanent disability, in order to increase damages. Sometimes it is difficult for the physician to detect this in a patient whose symptoms are wholly subjective rather than objective. When the physician has to take the patient's word for his condition, rather than to judge of it by what he can see, or feel or hear in observing and examining him, he may be deceived. Sometimes the physician is unable to detect a falsehood in this respect any more readily than a lawyer and becomes the unconscious agent in a scheme to defraud.

Take a concrete example for an illustration. An accident happens to some one. He is slightly injured and is taken home. He goes to bed and calls his physician, who on examination finds only a slight bruise on the patient's back. With all his skill the physician can find no other objective mark of injury. The subjective symptoms are described by the patient to the confiding physician in language of exaggeration. He insists that he cannot walk; that he has but little feeling in his lower limbs; that he suffers great pain in his back; that he has a persistent headache; that his appetite is gone; that he cannot sleep and that he has unpleasant dreams. He remains in bed and insists that he is growing worse from day to day. Then he sends for a lawyer—if one has not already followed him up—and commences an action for damages.

After a considerable delay the case is tried. The plaintiff is carried into court on a cot. He is the picture of despair and wretchedness. Medical experts are employed on both sides who differ greatly in opinion. The systematic deception with respect to his condition and sufferings brings a substantial verdict from the jury. The medical expert who has testified that he can say with reasonable certainty that the injuries are permanent and that the victim will never be well again, has been vindicated. The plaintiff has had his day in court. He is carried home and put in his accustomed bed, where he remains for a time. The verdict is paid. It is not very long before he begins to improve. At first he sits up a little in bed. Day by day he sits up more and more. Soon he begins to walk with a pair of crutches. In a week or two more he hobbles out on the street, with the aid of a cane. He gains strength now so rapidly that everybody wonders. At last he attends to business. The fame of his physician has greatly increased, for no other agency could have restored him from so great and " so permanent " an injury—unless it be the fact that he has received a handsome sum to compensate him for all his suffering. And then after he is as well as ever, it begins to dawn upon every one that the story which he told of his condition and his sufferings and the testimony of his physician as to the permanency of his injuries, was nothing but a train of falsehoods on his part and that the sworn opinion of his physician was either the result of gross deception on the part of the patient or what was worse, a dishonest opinion to be paid for by the patient out of the moneys he has unjustly received.

Third. If you engage yourself as an expert medical witness, do not be, nor appear to be, an advocate. Do not sit with counsel trying the case nor advise with them in court, for this will at once minimize the force and weight of any testimony which you may give. If the counsel in the case need a medical expert to aid them in suggesting questions to medical witnesses, let such expert confine himself to that duty and keep off the witness stand. If such a one gives testimony, the jury will rightly conclude that he is a partisan working for his side of the case, that his testimony is biased and that it is of little value as an aid in the determination of the controversy. It will be impossible for such a witness to convince the jury that his testimony is reliable and truthful, that he is stating his honest convictions or that his course is wholly upright. The medical expert should be free from all imputations upon his integrity. He should not only appear to be, but should in fact be honest, upright and truthful with respect to his opinions as well as with respect to any *facts* concerning which he testifies. In this way alone will his evidence carry weight and conviction to those whose duty it is to decide the case.

Fourth. Do not assume a knowledge you do not possess. The expert witness is employed because he is supposed to have special knowledge of the subject in hand, because he is an investigator, a scientific man or a specialist. It is dangerous to assume any of these qualities on the witness stand if one does not in fact possess them, for the skillful cross-examiner or the expert witness on the other side will expose and humiliate the witness making any such false assumptions.

Let me refer to an instance of this kind related by Judge Alton B. Parker, former Chief Judge of the Court of Appeals and before that one of the Justices of the Supreme Court in this judicial district. He was holding a term of court in Albany. The late Senator Hamilton Harris, one of the greatest lawyers of his day, was defending a negligence case brought by a woman against the New York Central Railroad Co. She had been injured by the carelessness of a railroad employee and had a clear right of recovery, the only question for the jury being one of damages. There were no visible injuries but the woman said she suffered greatly and her physician, without knowing what was the matter with her, accepted all that she said as true and as a result testified at first that he thought her spine was affected. A long examination failed to reveal very clearly how or in what way. Many medical works were referred to and once the doctor said he thought all her vital organs were in good condition. When Senator Harris took the doctor in hand on cross-examination he approached within a few feet of him and said:

" Doctor, do you know I have never read any of those medical books. You and the attorney on the other side seem to understand all about them, but you see, I don't. I have listened carefully, but I have not been able to get hold of it. Now it strikes me, that perhaps the jury may be in the same situation as I am; perhaps they have never read those books, and I would like to ask you a few questions to see if you cannot help the jury and help me."

" Now, doctor, what do you say is the matter with her lungs?"

" Nothing the matter with her lungs."

" Not a thing?"

" No, not a thing."

" Perfectly sound, doctor?"

" Yes, sir, perfectly sound."

" Well, you see, I didn't understand. I had an idea that there was something the matter with her lungs. Then, of course, it is her heart?"

" No, she has a perfectly sound heart."

" Oh, a sound heart too. I see, it is her liver, doctor?"

" No, there is nothing the matter with her liver."

" Well, then, certainly it is her kidneys?"

" No, it is not her kidneys."

"Are they sound?"

"Yes, perfectly sound."

"Let me see, lungs sound, heart sound, liver sound, kidneys sound. Will you be so good as to tell us what *is* the matter with her, doctor?"

"Well, her trouble is functional."

"Oh! it is her functions, is it? Doctor, won't you be good enough to locate, for the benefit of the jury and myself, those functions?"

The doctor, with a very great deal of disgust in his tone and a loud voice turned to Judge Parker and said, "Judge, have I got to answer such fool questions as that?"

The Senator sat down quickly with the remark, "Never mind, doctor."

He said nothing more about it until he addressed the jury, whom he was able to convince without any trouble, from the doctor's evidence alone that the plaintiff had no organic trouble and that her "functional trouble" if any, was of such an illusive character that the doctor was unable to locate or describe it. The verdict was only for nominal damages.

Fifth. I desire to make only one other but an important suggestion and it is this: On the witness stand speak English and testify by the use of simple and plain language. The jury are usually plain, every day, non-professional men. They have not been trained in the meaning of medical terms. In order to be understood, the doctor on the witness stand must translate the language of medicine into that of every day life. Yet, how many of them, and some of them of considerable eminence, fail to do this. It is a weakness peculiar to the medical profession, that they commonly clothe their descriptions of the human body and their statements of medical facts in a professional phraseology that the average human clay cannot understand. This is all calculated no doubt to give an air of mystery to an honorable and ancient calling, but that is hardly necessary in this enlightened age. It would have answered much better in the days long since passed when some doctors used to bleed a patient to cure a wart, or on the theory that like cured like used to prescribe snails for consumption because it was a *slow* disease. The greatest quack is usually the greatest offender in this respect. He is the one who is generally the most glib in the use of antiquated Latin or Greek, that even he does not understand, in speaking about medical matters. It should be borne in mind that there is on nearly every jury one or more men of sufficient intelligence "to leaven the entire lump" so to speak. These men are usually able to prevent the jury as a whole from being deceived or misled or overawed by medical witnesses who depend upon non-understandable medical terms in giving their testimony, in the mistaken belief that these will be more convincing to the average juror than plain and easily understood words.

I can illustrate the condition I have been describing more clearly perhaps by relating an incident that took place on a trial before me, some years ago, of an action for damages for a personal injury, in which the late Dr. Willis G. Macdonald was one of the medical expert witnesses for the defense.

The plaintiff had been injured by being thrown from a trolley car as he was alighting therefrom, through the alleged carelessness of the motorman in starting the car too soon. His expert was a well educated young physician, who apparently was appearing in court as a professional witness for the first time. His testimony was couched in classic language showing that he was fresh from his Latin and Greek and from his medical books and showing quite as clearly that he was "fresh" as a medical witness. He described the injury as a very pronounced ecchymosis beneath the epidermis on the right posterior about six inches from the median line.

Some of the tender hearted and sympathetic members of the jury, without knowing anything at all what he meant, were supposed to think that a man who had suffered such an awful calamity as that should be well paid for it and that any railroad company whose carelessness had inflicted all that upon a human being should suffer the consequences by way of a large verdict.

It was soon Dr. Macdonald's turn—and I may mention here, after having heard him testify in many important trials, that he was not only a great surgeon, but an unusually valuable medical witness, for he was honest and able and possessed in a remarkable degree the faculty of simple expression and of forcefully and clearly stating the reasons for any opinion which he gave and he was great enough to admit that he did not know things which were beyond the realm of human or expert knowledge.

He had had the opportunity of examining this plaintiff soon after the accident and was quite amused at the high sounding description which his young professional friend, on the other side, had given of the comparatively slight injury.

The defendant's counsel asked Dr. Macdonald to describe in his own way what his examination had revealed. He replied that he found a black and blue spot about as large as a half dollar on the plaintiff's rump on the right side about six inches from the center of his back, and that a bruise of that kind would ordinarily heal completely in a week or ten days.

" But," said the counsel, " didn't you find this awful ecchymosis of the epidermis which the other doctor testified about? "

" Oh, yes," he replied, " I found that, but I have just told you in plain English just what it was, where it was and how long it would last."

All the members of the jury at once saw the point and when their verdict was rendered, it was not much larger than the black and blue spot, which had such an awful name when described in a dead language.

I have already spoken too long and must stop. I trust that in what I have said I have convinced you that to be a genuine and valuable medical expert witness, you must mix honesty and sincerity with your learning and skill and that you must possess in a high degree a love of truth and justice; that you must be thorough in your examinations and exhaustive in your research; that you must speak in plain and simple terms; and tell what you know and no more; that your opinions must be based on scientific authority and experience; and that you must be able to give a sound reason for every opinion you express. More than this you should be conscious that important personal and property rights may often depend upon your testimony and that you should therefore be careful and conservative on the witness stand

and make no attempt to give scientific facts when none exist, nor to express opinions when no basis therefor is known.

You should always bear in mind that "truth is like gold; the more it is burnished, the brighter it becomes."

If any of you, my young friends of the Medical College, are ever employed to testify as a medical expert, it will be well for you to give heed to the suggestions I have made and it will be still better if you will follow the oft-quoted advice which Polonius gave to his son, in Hamlet:

> "This above all; to thine own self be true,
> And it must follow, as the night the day,
> Thou canst not then be false to any man."

HEADACHE IN ORGANIC AND FUNCTIONAL DISEASES OF THE NERVOUS SYSTEM.

Read before the Medical Society of the County of Albany, March 23, 1916.

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Headache is the most common of nervous symptoms, but is not in itself necessarily symptomatic of nervous disease. Headache may be occasioned by systemic toxaemias either of exogenous or of endogenous origin, it may be encountered as a manifestation of circulatory disturbances and haemic disorders, it may be purely reflex in character and symptomatic of visceral disease, eye-strain, or naso-pharyngeal and other affections, finally it may be dependent upon local organic disease, particularly of an inflammatory nature, involving either the bony structures of the skull or the various sinuses which they contain.

The purpose of the present communication is to analyze more particularly the headache occurring in nervous disease proper, whether organic or functional, and to indicate as far as possible the specific features which it may exhibit in each of the more important nosologic entities of which it constitutes a dominant manifestation. It is essential indeed to correctly appraise the quality and severity of the pain as well as the degree of its persistence, to know the time of its appearance and maximum intensity if it be paroxysmal in character, and to be accurately informed regarding its usual distribution or the precise seat of its initial location, in order to intelligently undertake the all important task of ascertaining its pathogeny.

Headache symptomatic of organic nervous disease is practically limited to lesions of the brain and its membranes. It occurs in the various forms of meningitis and in the various types of intracranial tumor (including abscess) as well as in the local circulatory disturbances dependent upon regional arterial disease, but probably in every instance this headache is due in reality to irritation, direct or indirect, of the terminal filaments more particularly of the trigeminal nerve supplying the dura mater. In other words, the cephalalgia of intracranial organic disease is to be regarded as being essentially a meningeal reaction. It is the consensus of opinion that the cerebral tissue itself is devoid of sensibility. This supposition is borne out by a number of facts observed in the course of surgical interventions upon the brain. During cranial operations performed upon conscious patients it has been noticed that incision of the dura or cerebral cortex or electrical excitation of the cortical areas produced no local distress and that actual painful perceptions resulted only when traction was exerted upon the dura mater. It is well known likewise that the intolerable and excruciating headaches of cerebral tumor are frequently relieved, sometimes completely so, by properly oriented decompressive operations, and Harvey Cushing has called attention to the magic effect of simply splitting the dural capsule of non-removable pituitary neoplasms. Recently, Jelliffe has advocated the theory that, contrarily to what is generally admitted, the brain structures are susceptible of exhibiting pain reactions though they do not respond to the ordinary modes of peripheral sensory irritation. Jelliffe's contention is based partly on the observations of Head, which seem to show that the brain does react to the deep pressure stimulus, and partly upon the fact that lesions of the optic thalamus not infrequently give rise to severe and persistent pains in the contralateral regions of the body. Both of these arguments singularly fail in point of demonstrative significance. In the first place, the moment we speak of a deep pressure stimulus we necessarily imply displacement or distortion of the intracranial contents and therefore encroachment upon the dural attachments. As regards the contralateral hemialgia of thalamic lesions, it is a rare clinical manifestation associated especially with small foci which probably irritate the terminal ramifications of the fibres for pain and temperature (thalamic component of the antero-lateral ascending tract of Gowers) irradiating into the ventral segment of the optic thalamus. That this is a plausible interpretation of the genesis of this so-called pain of central origin seems to me to be substantiated by the fact that pains occur in lesions involving the central gray matter at other levels of the cerebro-spinal axis. It is only necessary to recall the acute, severe but transitory pain in the dorsal or lumbar region in cases of hematomyelia, the boring or lancinating pains in the thorax, shoulder and arm in the early stages of syringomyelia and the occasional occurrence of sharp pains in the area of disturbed objective sensibility in thrombosis of the posterior inferior cerebellar artery. It is significant that in all of these cases, the lesions are situated either in the proximity of the cell-complexes giving origin to the antero-lateral ascending tract of Gowers or in the actual path of this tract either in the cord or in the brain-stem. Moreover, it must not be forgotten that large foci in the optic thalamus produce an intense and persistent contralateral hemianesthesia which may or may not involve all forms of sensation. Anatomy has taught me that the optic thalamus is the end station, properly speaking, of the central sensory tracts and that it is to be regarded, from a relative physiologic standpoint, as being the true cortex of the sensory component of the projection fibre system. It is the final and collective perception zone of all forms of primary or elementary sensibility, in the same way that the Rolandic area is the initial generating zone of all motor impulses. The thalamo-cortical fibres which serve to unite the thalamus with the retro-Rolandic cortex simply represent the bridging neuron between the central sensory terminus and the central motor generator, in the same way that the reflex collaterals of Kölliker in the spinal cord serve to unite the entering posterior nerve-roots or peripheral sensory neuron with the anterior horn cell complex or beginning of the peripheral motor neuron. If this conception be legitimate, pain of central origin occurring in lesions of the thalamus is the analogue of muscle spasm resulting from circumscribed irritation of the motor area of the cerebral cortex. If an irritative lesion in the latter region may determine convulsive seizures extending to the whole of the opposite side of the body, why may not a local irritation of the sensory nerve endings in the optic thalamus produce painful perceptions referable to the correlated peripheral regions? Pain of central origin may thus be regarded as an irritative phenomenon, a sensory spasm in a certain sense. It is a well known fact, moreover, that it rarely occurs when there is a gross loss of objective sensibility, in the same way that motor irritative manifestations are exceptional in the presence of total paralysis.

We will take up first the discussion of the headache associated with the various organic lesions of the brain and its membranes.

Simple external pachymeningitis is an exceptionally rare disease that usually escapes diagnosis but which is probably responsible for certain obscure forms of chronic headache defying all treatment. It is believed that the condition may result from relatively insignificant traumatism about the head and from syphilitic and other forms of non-suppurative ostitis.

In pachymeningitis interna hemorrhagica headache is the most characteristic and constant symptom. It is usually severe and tenacious, commonly though not always riveted to a point of the skull corresponding with the seat of maximum lesion (parietal region) and is increased by movements of the head and much intensified with the approach of the apoplectiform attacks. The nature of this headache is rarely surmised until the occurrence of such an attack followed by evanescent hemiplegia.

In all forms of acute leptomeningitis (epidemic cerebro-spinal, tuberculous, purulent) headache is an early, severe and persistent symptom. This headache, which is of extreme violence and of bursting type, may be diffuse, though usually with maximum intensity in the occipital and frontal region, but not infrequently it is limited to the occipital region. That this headache remains to the end is well shown by the fact that even in the terminal coma the patient still carries the hand to the back of the head, and in subacute forms of meningitis, particularly the tuberculous variety, the shrill hydrocephalic cry emerging from an otherwise stuporous and reactionless patient is plainly demonstrative of the unabating intensity of the pain.

The headache of syphilitic or gummatous meningitis requires special consideration. It is one of the earliest and most constant symptoms, often paroxysmal in character and frequently exhibits a remarkable periodicity as regards the time of its appearance. It often has a distinctly nocturnal onset, or at least is worse at night, though sometimes it is worse in the morning and trace of it persists throughout the day. This headache is often of extreme severity and of a boring and hammering character. It may be located at any point of the skull, is usually deep seated and more or less circumscribed though it often shows a tendency to spread over a wider and wider area as it gradually increases in intensity. In the cortical form of syphilitic meningitis, the headache is often limited to the frontal or fronto-parietal region and accompanied by cutaneous hyperalgesia and by tenderness on percussion of the skull. In the basilar type, the headache is usually occipital and tenderness to percussion is generally absent though some authors claim to have observed a decided sensitiveness either to pressure or percussion above the eyebrows. Headache likewise occurs in the early stages of general paresis but soon ceases to claim attention with the advent of mental deterioration.

Leaving aside the association of other symptoms in these various forms of meningitis, the only positive means of establishing an early diagnosis of the underlying lesion is furnished of course by careful examination of the cerebro-spinal fluid. The genesis of the headache is obvious enough inasmuch as we have to do with actual inflammatory lesions of membranes abundantly innervated by branches of the trigeminal and vago-glossopharyngeal nerves. The element of increased intracranial pressure is undoubtedly an associated factor in many cases.

Cerebral tumor yields a cephalalgia which deserves the closest study owing to the widely varying features which it may exhibit. Although headache is generally regarded as the most constant general symptom of cerebral tumor, it is a fact that it may be entirely absent in from one-fourth to one-third of the cases.

The reason for this is simple enough if we bear in mind the facts previously discussed regarding the inherent insensibility of the cerebral structures and the statement already made that the headache is probably due to irritation of the nerves coursing in tht dura mater, whether these nerves are directly compressed or involved by the tumor, or otherwise irritated as the result of the traction exerted upon the dura by the mechanical distortion occasioned by the growth of the neoplasm. Vascular disturbances (congestion and oedema) and increased intracranial pressure, whether as the result of the local tumor mass or of the so frequently associated internal hydrocephalus, are undoubtedly likewise concerned in the determination of the dural reaction. These various considerations enable us to account for the fact that the headache is certainly more severe the nearer the lesion is to the surface of the brain and far more common in subtentorial (cerebellar) than in supratentorial (frontal and temporo-sphenoidal lobe) tumors. It is evidently for the same reasons that the nature of the tumor also seems to exert some influence and it has been noted that headache is rather less common in the infiltrating glioma than in the rapidly growing and more or less encapsulated sarcoma.

The headache of cerebral tumor varies greatly in intensity and character, but usually it is severe and not infrequently reaches such agonizing intensity as to lead the patient to think of suicide. It is deep seated, usually of a dull boring and grinding character, more rarely of a sharp lancinating type, and frequently accompanied by other vague cerebral sensations such as a feeling of fulness and pressure within the skull or a sense of constriction and tightness about the forehead. The headache may be further accompanied, as Achard has justly insisted, by other painful phenomena of distinctly neuralgic character in the trigeminal domain, and in one of my patients the most distressing symptom was the paroxysmal occurrence of severe pain in the left forehead and particularly in the eyeball (ciliary neuralgia). Finally, it may be stated that in some cases, especially in the early stages, the headache may exhibit all the features of genuine migraine, having a distinctly hemicranial distribution and occurring in paroxysms associated with severe vomiting.

The headache of cerebral tumor may be either continuous or paroxysmal. In the early stages it is more apt to be paroxysmal and sometimes recurs every night or every other day with almost the periodicity of malarial manifestations. In the later stages, the headache is usually more or less constant with occasional exacerbations. It is aggravated by cough, sneezing, vomiting or muscular effort.

As regards its situation, the headache of cerebral tumor may be either diffuse and generalized or more or less limited to one region of the skull. Not infrequently it is more marked on the side of the lesion and of maximum intensity in the frontal or occipital region. But even when the pain is limited to either the frontal or occipital region, its situation cannot be relied upon for topical diagnosis unless suggestive focal symptoms are present and certain other physical signs, presently to be described, can be positively demonstrated. It is a well known fact for instance that cerebellar tumor may give rise to a headache which is essentially and persistently frontal (irradiation from a recurrent branch of the ophthalmic division of the fifth nerve, supplying the tentorium cerebelli, to other branches of that division—Krause) and inversely that a tumor of the frontal lobe may produce occipital headache.

The headache of cerebral tumor may be associated with tenderness on percussion of the scalp and when percussion is painful only over a given circumscribed area this sign may be of value. This is more apt to occur when the tumor is superficial and springs either from the cortex, the meninges or the inner surface of the skull. Moreover Macewen has shown that the percussion note may be of heightened pitch and of greater resonance over the seat or in the immediate proximity of the tumor. In this connection, mention may also be made of the "cracked pot" sound which is sometimes elicited upon percussion over a definite region of the skull; it seems to depend upon imperfect synostosis of the cranial bones and has been observed particularly in young subjects.

Headache is an important symptom of cerebral tumor but a general diagnosis of tumor should never be made from its presence alone and I repeat that its location, however suggestive, should be discarded entirely as an element of topical diagnosis unless corroborative evidence of focal disease is at hand.

In cerebral abscess, headache is the commonest, earliest and most important of the general symptoms, and in some cases it is the only symptom present during a considerable period. It is sometimes relatively slight but rarely absent entirely, even in the so-called latent stage during which, it is true, it may occur only periodically. Usually it is constant with vesperal exacerbations. In many respects the headache of cerebral abscess resembles that of cerebral tumor, but in point of quality the pain is more closely analogous to that of meningitis. It may be of the greatest violence and superficial, but more often it is deep seated and of a dull bursting or constricting character. The headache has a tendency to localize itself upon the side of the abscess and, even more frequently than in tumor, it is associated with tenderness upon pressure or percussion over the seat of lesion. The other local physical signs above described may likewise be demonstrable.

As regards the situation of the headache, the remarks previously made in connection with cerebral tumor apply here with equal force; we note the same possibilities of error relative to the diagnostic significance of persistently circumscribed headaches. In general, abscess of the cerebellum is characterized by pain in the back of the head and nuchal region; this pain may extend to the upper thoracic segment of the vertebral column and be associated with retraction of the head and pronounced rigidity of the entire vertebral musculature. As in tumor however the headache may be exclusively frontal. In abscess of the temporal lobe the pain is most commonly referred to the temporal or parietal region.

Inasmuch as cerebral abscess is virtually a tumor, the pathogeny of its headache is much the same as that of the headache of tumor though we cannot well dismiss the influence of local toxaemia as a factor of decided importance. Lewandowsky, in fact, is firmly of the opinion that the headache as well as the vomiting and perhaps also the optic neuritis are due mainly to the toxic action of bacterial metabolic products. Moreover, when we consider that a large percentage of cerebral abscesses result from direct extension of inflammation from suppurative foci about the skull with the frequent occurrence of circumscribed meningitis as an intermediate lesion, the factors concerned in the production of the headache are sufficiently evident.

The headache of acquired internal hydrocephalus of adults resembles practically in every respect the headache of cerebral tumor, unless the condition pursues an acute course in which case the whole clinical picture is more closely analogous to that of tuberculous meningitis.

The headache of cerebral arteriosclerosis is important owing to the fact that it so frequently constitutes the prodromal headache of the apoplectic attack. It is usually a dull frontal or occipital headache felt on getting up in the morning and generally increasing during the day, sometimes to a distressing intensity, although it not uncommonly exhibits decided variations in severity from one hour to the next. It is generally accompanied by a feeling of pressure and heaviness especially about the forehead and is frequently associated with more or less vertigo and tinnitus aurium. This headache is much aggravated by thinking and other mental effort for which reason Josué called it "le signe de la pensée douloureuse" (the sign of painful thinking). It may closely simulate the headache due to astigmatism and to anomalies of refraction.

The pathogeny of this form of headache is obscure and uncertain. It is simple enough to speak of thickened blood vessels and contracted lumina with consequent inadequate irrigation of the cerebral structures, but this does not account for the pain reaction unless we assume the coexistence of venous congestion and oedema and hence some definite increase of intracranial tension, or else chronic proliferative changes in the dura and interstitial compression of the trigeminal filaments.

Before taking up the discussion of headache associated with functional diseases of the nervous system, it would be well perhaps to briefly consider the so-called neuralgic headaches. Although there is a very material difference between headache proper and true neuralgia, the occurrence of supraorbital and occipital neuralgia is not infrequently symptomatic of intracranial organic disease. I have already referred to the occasional presence of distinctly neuralgic attacks in the course of cerebral tumor. This is particularly apt to occur in tumors situated at the base of the brain in the anterior fossa of the skull which compress or otherwise involve the ophthalmic division of the fifth nerve. The pain is referred mainly to the distribution of the supraorbital branch and is felt above the eye and at the supraorbital foramen as well as over the forehead even up as far as the vertex. Sometimes the pain radiates into the eyeball and may even be limited to the eyeball (ciliary neuralgia). It occurs in distinct paroxysms, is usually unilateral and a tender point at the supraorbital foramen is generally demonstrable. Tumors in the middle fossa of the skull may give rise of course to neuralgic manifestations in the domain of the other branches of the trigeminal, but the distribution of the pain in such cases naturally extends beyond the limits of what may properly be called headache.

Occipital neuralgia, which in reality is a neuralgic affection of the occipitalis major, occipitalis minor and auricularis magnus, is an important form of neuralgia which may, with even more propriety, be classed under the heading of headache, owing to the fact that it is so frequently bilateral and more often continuous than paroxysmal. It is well to recall that it may be symptomatic of caries of the cervical spine, tumors of the superior cervical cord, cervico-bulbar pachymeningitis and syphilitic meningomyelitis of the same region. The pain is felt along the course of the nerves in the neck and over the occiput, it may extend upward as high as the vertex and on the other hand twinges may be felt over the scapular region, in the shoulder and running down the arm. The head is usually held instinctively in a fixed position in order to minimize the pain produced by movement. Tender points are to be found over the mastoid process, between it and the upper cervical vertebrae as well as between the insertions of the sternomastoid and trapezius muscles.

The headache of migraine occupies a place practically midway between genuine neuralgia and organic cephalalgia. It resembles neuralgia by its paroxysmal character and its unilateral or hemicranial distribution but differs from it by the absence of typical tender points though some authors, Möbius in particular, claim to have observed sensitiveness to pressure over the trigeminal and occipital points of Valleix. It resembles the headache of organic cerebral disease by reason of the severe paroxysms of vomiting which frequently accompany it, as well as by the definite though transitory evidences of focal cerebral disturbance which may precede its onset or appear at the height of its development. As is well known, the migraine attack in fully one-half the cases is ushered in by a sensory aura, usually visual in character and not infrequently hemiopic in type. This visual aura, which presents all the features of a true hallucination of vision, is variously described as a luminous spot of angular and shifting contour, a bright circle of rapidly varying diameter, a nebular field intermittently replaced by showers of sparks, etc. Sometimes with darkening of the central part of the visual field, its periphery is occupied by bright serrations which alternately diverge and converge, disappear and reappear and at the same time exhibit all the colors of the rainbow (scintillating scotoma). In other cases the visual aura is constituted essentially by a transitory hemianopsia either partial or complete. It is interesting to note that in a fair percentage of cases these different forms of visual hallucination occupy, with regard to the location of the subsequent hemicrania, the contralateral half field. The duration of the aura varies in general from ten to twenty minutes. Then the characteristic headache appears on one side of the head, beginning most commonly in the region of the temple, more rarely in the occiput or in the forehead. The pain varies considerably in severity and character, but usually it is intense and of a boring or throbbing character. As it steadily increases in severity it gradually spreads over the entire side of the head though its maximum intensity is usually felt over the eye and temple. In rare cases the pain may remain strictly confined to the latter region or be referred chiefly to the eyeball. Sometimes after the headache has continued on one side for a while, it extends over to the other side of the head and may leave the first side entirely or continue on both sides and thus become generalized. Less commonly the pain commences on both sides as a frontal or occipital headache which later extends over the entire head. In the occipital type the pain may pass down to the back of the neck and even radiate into the shoulder and arm. The headache of migraine does not always recur on the same side in a given patient though it seems that the left sided localization is by far the more common. The duration of the migraine attack may vary anywhere from one or two hours to two or three days, but usually it approximates twelve hours. Nausea accompanies almost every attack and vomiting is common; it occurs especially at the end of a paroxysm and may be exceptionally prolonged and of distressing severity. It is not intended to describe the various other manifestations which so frequently accompany the migraine attack such as the psychic disturbances and the vaso-motor phenomena, but the subject cannot well be dismissed without brief reference to the occasional presence of distinctly focal cerebral symptoms. In some cases, usually prior to the onset of the headache, but sometimes at the height of the paroxysm, a transitory motor aphasia, coupled with right sided hemianopic visual disturbances or with tingling, muscle-spasm or partial palsy of the right arm, occurs in connection with left sided hemicrania. In rare cases, a severe attack of migraine is followed by a homolateral paresis or paralysis of the motor oculi (ptosis, external strabismus, diplopia, pupillary dilatation) lasting several weeks. This constitutes the so-called ophthalmoplegic migraine. All these facts suffice to show that while we still know practically nothing positive regarding the pathogeny of migraine, there can be little doubt that it is essentially a cerebral disease. The most logical view thus far advanced in explanation of this paroxysmal affection is that it is due to vascular spasm, and the majority of observers regard it as being a vaso-constrictor neurosis affecting evidently with predilection the posterior cerebral artery, though perhaps other vascular trunks likewise. Possibly the initial vascular spasm is followed by a more or less widespread reactive congestion and oedema sufficiently marked to occasion a transitory intracranial hypertension. At any rate the whole clinical picture is such as can only be explained by very decided circulatory disturbances in the meninges and cerebral cortex with consequent irritation of the dural nerve-supply and impairment of the cortical functions. To assert as some authors do that migraine is a general disease of which the headache is only one symptom appears to me to be just as inaccurate and unjustified as to maintain that epilepsy is a general disease of which the convulsive seizure or the evanescent unconsciousness is but an accidental manifestation.

The so-called headache of neurasthenia is very common, occurring in fully three-fourths of the cases. It is constituted not so much by an actual head pain as by a feeling of weight and pressure, or of tightness and traction, referred most commonly to the occipital region though sometimes to the forehead, temple or vertex. This headache occurs especially in the morning or at least is apt to be worse in the morning before breakfast. Not uncommonly the cephalic distress takes the form of a tight constricting band compassing more or less completely the entire circumference of the head from the eyebrow to the occiput; this is the so-called lead cap or neurasthenic helmet of Charcot. Neurasthenic patients moreover complain of various other discomforts about the head, such as a feeling of tightness, creeping, throbbing or buzzing, underneath the scalp. An actual hypersensitiveness or hyperaesthesia of the scalp is not uncommon. Some patients simply speak of a dulness or empty feeling in the head unaccompanied by actual discomfort.

The headache occurring in hysteria is described as a throbbing, burning or boring pain which may be deep seated though more commonly superficial and then usually associated with such hyperaesthesia of the scalp that merely touching the integument or slightly pulling on the hair provokes the most agonizing facial expression. The headache of hysteria often occurs in paroxysms of distinctly periodic type, appearing more particularly towards evening or in the early part of the night sometimes in so characteristic a fashion as to closely suggest the nocturnal headache of syphilis. Similarly, pains of a varying character referred to the temporal region, frequently bilateral and recurring daily at a definite hour, are not uncommon in hysteria and were described by Brissaud as "habit pains." A peculiar form of hysterical cephalalgia is the so-called clavus hystericus in which the patient experiences the distressing sensation of a nail being driven deeply into the skull, most commonly over the vertex or the temporal region. The headache of hysteria may exhibit still other features and simulate that occurring in a number of well-defined disease entities. Accompanied by severe paroxysms of vomiting it may suggest cerebral tumor, or when limited to one side of the head it may closely resemble a genuine migraine attack. In rare cases, after a prodromal malaise and generalized asthenia, a hysterical headache may develop, persist night and day to the point of producing insomnia and anorexia; later, vomiting, wild shrieks and delirium appear, followed by retraction of the neck, opisthotonos and rigidity of the extremities and the whole clinical picture is clearly that of an acute meningitis (hysterical pseudo-meningitis). Fortunately the pulse and temperature are not equally suggestible and in doubtful cases the cerebrospinal fluid may be relied upon to betray the imposture. It is difficult to formulate a definite pathogenesis for the headache of hysteria; it is probable indeed that there is no such thing as a hysterical headache properly speaking. In many cases the description of the agonizing pain in the head is accompanied by such a cheerful and reassuring countenance that the fraudulent nature of the headache imposes itself. That hysterical patients however do suffer from genuine headache cannot be questioned, but then there is little doubt that the headache is due in reality, not to the hysteria, but to some entirely distinct cause, be this eye-strain, auto-toxaemia or some other associated disturbance. In other words, the coincidence of other morbid states must never be forgotten. Possibly in some cases, especially those in which agitation, anxiety and other clearly psychic manifestations predominate, the headache like the other symptoms may be due to ventricular distention, a condition to which Southard has recently called attention in cases of dementia praecox, manic depressive insanity and other functional psychoses.

Headache occurs in epilepsy but presents no strikingly characteristic features; it may precede but more commonly follows the convulsive seizure.

Despite the fact that I have limited myself to the discussion of headache symptomatic of nervous disease, it is plain that this symptom alone furnishes the basis for a most exhaustive survey of the patient's history and a most scrupulous exploration of the physical or objective spheres. In terminating, I would urge that in every case of persistent headache, aside from the ordinary routine physical examination and urinalysis, the condition of the eye-grounds and cranial sinuses be systematically determined, and, in the absence of intracranial hypertension presumably due to cerebellar disease, that the cerebrospinal fluid as well as the blood be subjected to the Wassermann reaction. It is no longer legitimate to allow a severe cephalalgia to continue for weeks and months without availing ourselves of all the means at our disposal for the elucidation of its pathogeny.

Correspondence

ALBANY, N. Y., May 5, 1916.

To the Editor, ALBANY MEDICAL ANNALS.

A recent number of the *Journal of the A. M. A.* (April 8, 1916), contains the results of the examinations of medical students before the State Boards for license to practice. On page 1105 is given Table C. The following is the record of some of the medical colleges of New York. (Graduates of 1915):

College	Number examined	Percentage of Failures
Albany Medical College	33	8.8%
College of Phy. and Surgeons	51	11.8%
Cornell University	15	6.7%
Syracuse University	9	11.1%

This showing is no more gratifying than the results of the practical examinations for hospital internships. About half the class competed in Greater New York for hospital internships in competition with students from all the leading eastern medical schools. Every one received an appointment and most of them stood high in the list. As to the three failures before the State Board, only one failed in a senior subject, i. e., surgery alone. If a rule which was adopted two years ago and automatically went into effect this year, viz., to allow no man to come up for his senior examinations who had not passed his primaries—our record would have been perfect, the best record made in New York. This was accomplished in spite of the uncertainty existing about the continuance of the college and regardless of the resignations of many of the older members of the faculty and a few of the instructors. Although the teaching staff was harrassed by doubts of the future and difficulties of the then present and kept as a result in a continual ferment, a record was made unprecedented in the history of the college and highly creditable to any medical institution in the country.

In the midst of these trials it was plainly evident how pronounced were many of the friends of the college in their failure to support or even encourage this teaching faculty who had agreed to and carried out every suggestion recommended and how lacking in kindness and generosity were their comments about them and their work at all seasons and on all occasions.

ANDREW MACFARLANE.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, APRIL, 1916.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	19
Typhoid fever	1
Scarlet fever	0
Measles	7
Whooping cough	5
Diphtheria and croup	2
Grippe	2
Diarrheal diseases	0
Apoplexy	15
Pneumonia	9
Broncho-pneumonia	3
Bright's disease	12
Cancer	7
Accidents and violence	7
Deaths under one year	24
Deaths over seventy years	26
Death rate	17.36
Death rate less non-residents	15.59

Deaths in Institutions.

	Non-Resident.	Resident.
Albany Hospital	2	8
St. Peter's Hospital	2	9
Homeopathic Hospital	2	7
Albany Hospital Camp	2	5
Child's Hospital	1	0
St. Margaret's House	2	1
Lathrop Memorial	2	1

Maternity Hospital	1	3
Central Federation Camp	0	1
Albany County Hospital	2	1
Hospital for Incurables	1	1
Home for the Aged	1	2
Public places	0	3
	18	42
Births		207
Still births		2

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	6
Scarlet fever	43
Diphtheria and croup	10
Chickenpox	5
Measles	495
Whooping-cough	31
Tuberculosis	48
Mumps	138
Septic sore throat	3
Cerebrospinal meningitis	2
Puerperal septicaemia	1
Total	782

Number of days quarantine for scarlet fever:
Longest...... 32 Shortest...... 30 Average...... 30 6/16
Number of days quarantine for diphtheria:
Longest...... 23 Shortest...... 6 Average...... 16 2/5
Fumigations:
Houses.................. 303 Rooms.................. 940
Milk bottles disinfected.................. 712

Communicable Disease in Relation to Schools.

	Reported		
	D.	S. F.	M.
Public School No. 1	1	..	1
Public School No. 2	..	..	1
Public School No. 3	..	..	9
Public School No. 5	..	1	..
Public School No. 6	..	..	5
Public School No. 8	1	2	6
Public School No. 10	..	..	21
Public School No. 11	..	..	2

Public School No. 12	..	..	8
Public School No. 14	..	1	7
Public School No. 15	..	1	1
Public School No. 16	..	4	18
Public School No. 17	..	1	..
Public School No. 21	..	..	31
Public School No. 22	2	..	7
Public School No. 24	..	1	19
Miss Quinn's School	..	..	1
Casey's School	..	..	1
High School	..	..	1
N. Y. S. Normal School	..	..	1
Albany Boys' Academy	..	..	2
Albany Female Academy	..	..	4
St. Agnes School	..	..	4
Holy Cross School	..	..	7
St. Joseph's Academy	..	..	10
St. Patrick's Institute	..	..	27
Cathedral School	1	..	8
Lady of Angel's School	..	..	19

TUBERCULOSIS.

Living cases on record April 1, 1916		489
Cases reported:		
By card	48	
Dead cases by certificates	4	
		52
		541
Dead cases previously reported	15	
Dead cases not previously reported	4	
Died out of town	1	
		20
Living cases on record May 1, 1916		521
Total tuberculosis death certificates filed during April, 1916		19
Non-resident deaths:		
Albany Hospital Camp	2	
Child's Hospital	1	
St. Margaret's House	1	
		4
Resident deaths		15

Cases of Communicable Disease Visited.

Tuberculosis	104
Diphtheria	1
Measles	10
Total	115
Physicians visited	18

BENDER LABORATORY REPORT.

Diphtheria.

Initial positive	17
Initial negative	259
Release positive	11
Release negative	88
Suspicious	9
Total	384

Test of Sputum for Tuberculosis.

Positive	13
Negative	58
Total	71

Widals.

Positive	5
Negative	10
Suspicious	5
Unsatisfactory	3
Total	23
Wassermann tests	70
Milk analyses	90

BUREAU OF NUISANCES.

Complaints made	85
Privy vaults	1
Closets	3
Drains	2
Plumbing	8
Water	9
Stagnant water	2
Sewer	1
Gas	1
Filthy yards	3

Filthy alleys	6
Filthy cellars	3
Filthy lots	1
Filthy premises	18
Stable	1
Chickens	4
Dogs	3
Rat	1
Dead animals	1
Garbage	4
Ashes	1
Smoke	2
Ventilation	2
Noise	1
Unclassified	7
Inspections	87
Sanitary	48
Plumbing	39
Reinspections	99
Sanitary	71
Plumbing	28

HEARINGS.

Cases heard before health officer	8
Nature of cases:	
Privy vault	2
Filthy premises	2
Goose	1
Stable	1
Plumbing	2
Disposition of cases:	
Abated	6
Ordered summarily abated	1
Ordered reinspection	1

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	242
Old houses	95
New houses	147
Iron drains	48
Connection street sewers	20
Tile drains	19
Urinals	6
Cesspools	29
Wash basins	77

Sinks	63
Bath tubs	76
Washtrays	44
Tank closets	117
Slop hoppers	10
Permits issued	167
Plumbing	127
Building	40
Plans submitted	54
Old buildings	28
New buildings	26
Houses tested	45
Blue or red	1
Peppermint	2
Water test	42
Houses examined	53
Re-examined	80
Valid	29
Without cause	24

DEAD ANIMAL REPORT.

Animals removed from first precinct	25
Animals removed from second precinct	32
Animals removed from third precinct	22
Animals removed from fourth precinct	20
Animals removed from fifth precinct	57
Kennel cats removed	334
Kennel dogs removed	127
Total	617
Horses removed	36
Dogs removed	164
Cats removed	394
Rats removed	20
Chickens removed	2
Rabbits removed	1
Total	617

BUREAU OF MARKETS AND MILK.

Public market inspections	5
Market inspections	34
Fish market inspections	9
Packing house inspections	1
Milk depots inspected	11

Stores inspected	128
Milk cans inspected	170
Milk cans condemned	2
Lactometer readings	134
Temperature readings	134
Fat tests	86
Sediment tests	75
Bacterial counts	71
Milk dealers permits issued	56
Storekeepers permits issued	328
Pork condemned, pounds	50

Miscellaneouus.

Cards posted for communicable disease	398
Cards removed	362
Notices served on schools	782
Notices served on stores	90
Notices served on factories	92
Postal card returns sent to doctors	398
Postal card returns received from doctors	306
Inspections and reinspections	292
Work certificates issued to children	20
Vaccinations	12
Cases assigned to health physicians	60
Calls made	135
Garbage collected from first district, barrels	192
Garbage collected from second district, barrels	200

Medical News

Edited by Arthur J. Bedell, M. D.

Albany Guild for the Care of the Sick.—Department of Visiting Nursing.—Statistics for April, 1916.—Number of new cases, 198; classified as follows: Dispensary patients receiving home care, 20; district cases reported by health physicians, 7; charity cases reported by other physicians, 68; moderate income patients, 75; metropolitan patients, 28; old cases still under treatment, 535; total number of cases under nursing care during month, 733. Classification of diseases for the new cases: Medical, 26; surgical, 10; gynecological, 2; obstetrical under professional care, mothers 48, infants 45; eye and ear, 4; skin, 0; throat and nose, 0; dental, 0; infectious diseases in the medical list, 63; surgical list, 0. Disposition: Removed to hospitals, 18; deaths, 27; discharged cured, 102; improved, 56; unimproved, 6; number of patients still remaining under care, 524.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 3; nurses in attendance, 3; patients carried over from last month, 4; new patients during month, 5; patients discharged, 8; visits by head obstetrician, 0; by attending obstetrician, 45; by students, 34; by nurse, 62; total number of visits for this department, 141.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,545; for professional supervision of convalescents, 873; total number of visits, 2,418; pay visits, 822; charity visits, 723; unrecorded visits, 873; cases reported to the Guild by 2 health physicians, and 39 other physicians, graduate nurses 7, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 92; new patients, 144; old patients, 518; total number of patients treated during month, 662; Classification of clinics held: Surgical, 13; nose and throat, 9; eye and ear, 15; skin and genito-urinary, 8; medical, 13; lung, 7; dental, 0; nervous, 3; stomach, 5; children, 10; gynecological, 9.

Medical Society of the County of Albany.—The regular meeting of the Medical Society of the County of Albany was held at the Supreme Court Chamber, City Hall, Thursday, April 27, 1916, at 8.30 p. m. The following program was presented: "Irregular Heart Action and Its Treatment as Based on Modern Investigation," Dr. Nelson K. Fromm, Albany; "Moving Picture Demonstration of Surgical Technic," Drs. John Abodine and Charles H. Chetwood, New York City.

Medical Society of the County of Schenectady.—The regular meeting of the Medical Society of the County of Schenectady was held in its rooms in the New County Building. Tuesday, May 9, 1916, at 8.30 p. m. Scientific program: "Report of Some Cases of Trichinosis" (with lantern slides), Drs. W. B. Stone and W. L. Fodder; "The Relation of the Physician to Vital Statistics" (with lantern slides), Dr. Cressy L. Wilbur, Director of Division of Vital Statistics, N. Y. State Department of Health.

Saratoga Springs Medical Society.—A meeting of the Saratoga Springs Medical Society was held at the Elks Club, Friday, April 28th, at 9 p. m. Program: "Symposium on Tuberculosis (non-bacillary cases)," Drs. Horace J. Honk, William E. Lawson, Vernon M. Parkinson, Arthur B. Neeb, Metropolitan Sanatorium, Mt. McGregor.

Medical Society of the County of Rensselaer.—The regular monthly meeting of the Medical Society of the County of Rensselaer was held on Tuesday, May 9, 1916, at Marshall's Sanitarium, Troy, at 8.30 p. m. A demonstration of nervous and mental cases was given by Drs. C. J. Patterson and G. R. Stalter.

Medical Society of the State of New York.—The one hundred and tenth annual meeting of the Medical Society of the State of New York was held in Saratoga Springs, at the United States Hotel, May 16th to 18th.

Public Health Course, Albany Medical College.—The Albany Medical College announces that the following lectures were delivered: April 26th, "Medical Inspection in Schools," Dr. W. A. Howe, State Medical Inspector of Schools, New York State Department of Education. May 3rd, "Vital Statistics," Dr. Cressy L. Wilbur, Director Division of Vital Statistics, New York State Department of Health. May 10th, "Sanitary Phases of Milk Production," Mr. H. B. Winters, Deputy Commissioner, New York State Department of Agriculture.

Public Health Libraries.—Commissioner Biggs of the State Department of Health has prepared lists of books of established value on health suggestions which he recommends libraries in the State to purchase. Three lists have been prepared, the first which costs $10 includes twenty-four books and pamphlets; a second which numbers thirty volumes and includes several valuable reference works, costs $25 while the third the cost of which is $50 numbers forty-eight volumes and covers the subject of public health in a comprehensive manner.

House Passes Leprosarium Bill.—The House of Representatives on May 5, passed house bill No. 103, an act to provide for the care and treatment of persons afflicted with leprosy and to prevent the spread of leprosy in the United States, in which it asks the concurrence of the Senate.

Examination for Navy Medical Corps.—The next examination for admission to the Medical Corps of the Navy will be held on or about June 16, at Washington, D. C., Boston, New York, Philadelphia, Norfolk, Va., Charleston, S. C., Great Lakes, Chicago, Mare Island, Calif., and Puget Sound, Wash. Applicants must be citizens of the United States between 21 and 30 years of age graduates of reputable medical schools and must apply for admission, applications being in the handwriting of the applicants, and must be accompanied by letters or certificates from two or more persons of good repute testifying from personal knowledge as to good habits and moral character; a certificate that the applicant is a citizen of the United States, a certificate of preliminary education, graduation from an accepted high school or an accepted equivalent; a certificate of medical education giving name of school and day of graduation and certificate of hospital service or special educational or professional advantages. These applications should reach the Bureau of Medicine and Surgery, Washington, D. C., not later than June 5th.

New Home for the Blind.—The Society for the Relief of the Destitute Blind, New York, having outgrown its present quarters at Amsterdam avenue and 104th street will erect a new building at Grand Boulevard and 193rd street. The new home which with the site will cost about $400,000 will be a three-story fireproof structure so planned that a fourth story may be added when greater accommodations are needed. It will be colonial in design.

American Climatological and Clinical Association.—The thirty-third annual meeting of this association was held in Washington on May 9th, 10th, and 11th, in connection with the tenth congress of American Physicians and Surgeons.

American Gynecological Society.—The forty-first annual meeting of the American Gynecological Society was held in Washington, May 9, 10, and 11.

Quarantine Bill Signed.—Governor Whitman, April 27, signed the Adler bill transferring the New York State Quarantine establishment to the federal government. This bill creates a commission consisting of the governor, lieutenant governor. attorney general, controller and State engineer and surveyor to negotiate the transfer of the quarantine property.

Authority of Boards of Health Threatened.—A bill known as the Simpson bill passed the legislature and is now before the Governor for action. It amends the Public Service Law so as to vest the power to regulate the number of passengers to be carried in street cars solely with the Public Service Commission. This amendment provides that "Nothing contained in the public health law or in any other statute, either general or local, shall hereafter be construed to authorize any local board or department of health or other local authority of a city to make or enforce ordinances, rules, regulations or orders limiting or regulating the number of passengers to be carried on any such car or cars." The intent and purpose of this bill is not to vest more power with the Public Service Commission but to nullify the authority of the Board of Health of New York City which about a year and a half ago pased an ordinance limiting the number of passengers to be carried in street cars.

Conference of Charities and Correction.—The seventh annual local conference of charities and correction was held in New York May 25th to 27th at which the following subjects were discussed: Public Health, Education, Families, Municipal Needs, Children, Delinquency.

NEW YORK STATE DEPARTMENT OF HEALTH.—No adequate control of the communicable diseases can be secured unless the presence of each and every case of communicable disease is early made known to the local health authorities. The Public Health Law and the Sanitary Code require the reporting of those communicable diseases specified by the department. The Sanitary Code and the State Commissioner of Health now require physicians to report the following diseases to the local health officer: Anthrax, chickenpox, cholera (Asiatic), diphtheria (membranous croup), dysentery, amoebic and bacillary, epidemic cerebrospinal meningitis, epidemic or streptococcus (septic) sore throat, German measles, glanders, measles, mumps, ophthalmia neonatorum, para-typhoid fever, plague, poliomyelitis, acute anterior (infantile paralysis), puerperal septicaemia, rabies, scarlet fever, smallpox, trachoma, tuberculosis, typhoid fever, typhus fever, whooping cough.

Suitable cards for reporting cases are furnished to physicians by the local health officer on request. Physicians are required by the Sanitary Code to give the name, age, sex and address of each individual case of communicable disease under their care. Physicians who are called in consultation should see that every such case is reported.

The department now has adequate facilities for enforcing the law and notice is now given for the second time to every physician in the State urging upon him the importance of complying with its provisions. The Commissioner of Health is required to enforce the Public Health Law and hereafter if physicians are found to be violators of it, the department will be compelled to take such further action as may be deemed necessary under the circumstances to bring about full compliance with its provisions.

MEETING OF THE NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.—The twelfth annual meeting of the National Association for the Study and Prevention of Tuberculosis was held at the New Willard Hotel, Washington, D. C., May 11th and 12th.

ROME STATE CUSTODIAL ASYLUM.—Summer School Announcement for Physicians.—A summer course in clinical medicine and psychology, for recently graduated physicians, to perfect themselves in a knowledge of physical, mental and nervous diseases of children, is offered at the Rome State Custodial Asylum as follows:

The course will cover a period of ten days, during which time the students will have an opportunity to observe and study special groups of defective children, and we hope in this way to better prepare these young physicians for the position of medical school inspector in the various communities where they may later locate.

The work will be made as intensely practical as possible, the students being given an opportunity to choose so far as possible just what line of work they prefer to take up, and then make special studies of such groups. Their work will be supervised and directed by the medical staff, and they will also have an opportunity to watch special educational and manual training methods as carried on for such children. Thus, they will be the better able to assist in directing special class work in public schools, wherever they may serve later as medical inspectors.

There will be daily lectures by experts from 3 to 4 P. M. on the theory and practice of the work.

The institution is supported entirely by the State of New York for the care of all ages, grades and conditions of the feeble-minded, receiving cases from all parts of New York State, cares for 1,550 feeble-minded and has 200 officers and employees and a corps of fourteen teachers and special attendant teachers carrying on all lines of work applicable to the care and training of the feeble-minded.

It is very important, in connection with the medical work in the public schools among children, that better facilities be provided for the education and training of the backward and exceptional children, and thus more effort be made to diagnose the mental condition of the children, and the physician prescribe in more detail the line of work best suited to the various cases, as it is becoming more and more the policy of the State to educate (and properly educate), all the children, and not try to fit them all to one mould.

We will be able to accommodate from twelve to twenty men in each group for ten days, and the course will be repeated during the month, the first course from June 6th to June 16th, and the second course from June 19th to June 29th.

There will be no charge for this course, and board and lodging will be furnished free, the same as is usually done in general hospitals for clinical assistants and medical internes.

All applications for entrance to this summer course and communications should be addressed to the Rome State Custodial Asylum, Rome, N. Y.

Rome State Custodial Asylum.—Summer School Announcement.—The Summer Training School for Teachers in preparation for teaching special classes in the public schools, and also in institutions for the feeble-minded, will be held at the Rome State Custodial Asylum during the summer of 1916 from July 3rd to July 29th.

This summer school will be open to graduates of normal schools and teachers' training schools.

There will be no charge for tuition. However, a charge of $16 will be made for board and lodging, at the institution.

The institution is supported entirely by the State of New York for the care of all ages, grades and conditions of feeble-minded, receiving cases from all parts of New York State, cares for 1,550 feeble-minded and has 200 officers and employees and a corps of fourteen teachers and special attendant teachers carrying on all lines of work applicable to the care and training of the feeble-minded.

The work will be carried on in the most practical manner possible. The teachers during the first week will observe the general work of the institution and the special work of the regular teachers, following which visiting teachers, divided into sections, will carry on actual class work with the inmates under the supervision of our head teacher and the observation of the officers of the institution, thus gaining not only practical knowledge in training methods, but also in general physical care and institution management as well as special class work for defectives, and also come to know these defective classes from actual daily observation of and association with them.

There will be daily lectures by experts from 3 to 4 P. M. on the theory and practice of the work.

There are many vacancies for special teachers for classes of defectives in public schools for which the teachers receive larger salaries than in general primary work and many opportunities for promotions or advancement in the work.

All applications for information or entrance to this summer school should be addressed to the Rome State Custodial Asylum, Rome, N. Y.

PERSONALS.—Dr. WOODARD SHAW (A. M. C. '13), has been appointed city physician of Gloversville.

ENGAGEMENTS.—The engagement of Dr. ABRAHAM L. OLSHANSKY (A. M. C. '11), New Haven, Conn., and Niss Rose Bellin, of Albany, N. Y., has been announced.

—Announcement has also been made of the engagement of Dr. FRANK C. FURLONG (A. M. C '14), Gloversville, and Miss Carmela M. Mauro also of Gloversville.

MARRIED.—Dr. JOSEPH P. O'BRIEN (A. M. C. '98), Albany, and Miss Margaret Townsend, Plainfield, N. J., were married at Plainfield, Saturday, May 6, 1916.

—Dr. WOODARD SHAW (A. M. C. '13), Gloversville, and Miss Bertha Crump, were married May 2, 1916.

DIED.—Dr. CHARLES E. WEIDMAN (A. M. C. '95), Cresbard, S. D., a Fellow of the American Medical Association, died at his home about April 21, 1916, aged 45.

—Dr. THOMAS D. COLLINS (A. M. C. '98), Ballston Spa, N. Y., died at his home April 5, 1916.

In Memoriam

CHARLES E. WEIDMAN, M. D.

Dr. CHARLES E. WEIDMAN, a graduate of the Albany Medical College in the class of 1895, died recently in Cottonwood, S. D., in the forty-sixth year of his age.

After graduation Dr. Weidman began practice in Gallupville, N. Y., his native town. He was supervisor from 1896 to 1901, vice-president of the Schoharie County Medical Society in 1903-4, and also president of that society. Dr. Weidman removed about ten years before his death to South Dakota, and suffered from poor health for a long time. He is survived by his widow, a brother and a sister.

CALVIN EMERICK, M. D.

Dr. CALVIN EMERICK of the Albany Medical College of the class of 1897, died at his home in Glasco, N. Y., January 26, 1916.

Dr. Emerick was born at West Camp, N. Y., April 17, 1870, and received his early education at the West Camp District School and the Catskill High School. After graduation from the Albany Medical College he began practice at Woodstock, Ulster County, N. Y., and several years later removed to Glasco where he remained in active work until the time of his death. He was prostrated while attending a patient, pneumonia developed, and he survived only a few days.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Life and Law. (The Development and Exercise of the Sex Function.) By MAUDE GLASGOW. M. D. Cloth. Pp. 187. The Knickerbocker Press, 1914. G. P. Putnam's Sons, New York and London.

This volume, which is a discussion of the question of sex hygiene and kindred topics from the standpoint of a woman, will prove very interesting, and perhaps instructive reading, to any mere man in whose hands it may fall. The keynote of the book occurs in a verse on the title page:

"Reasoning at every step he takes.
Man oft mistakes his way;
While meaner things which instinct guides
Are seldom known to stray."

Her opinion of the opposite sex is that "the male introduced for the purpose of affording variation in the race, is always more variable than the female; he is also more unstable, so that the possibility of reversion to original types is more likely to exist in the male in the absence of causes favorable to the existence of new types that have been introduced."

The Reverend Father Vaughn, in an address given in London a few weeks ago, deplored the great fall in the birth rate of England in the last fifty years, from forty to nineteen per cent, and berated the English women for the smallness of their families and their attention to millinery adornment and affection for poodle dogs.

Dr. Glasgow takes the other view and claims it is all the man's fault. In one place she states that "in the human male the parental instinct has been carefully cultivated, but in not a few it is still rudimentary. When those in whom the quality is undeveloped. are placed in positions of authority. the decisions of such men show its lamentable absence. Because of this defect in development, certain types of individuals are inherently incapable of getting the mother's point of view."

These quotations will give some idea of the scope of the book, which takes up the question of motherhood, venereal diseases, prostitution and instruction of the young in sex hygiene.

In conclusion, the author quotes from Ellen Key, "that not until the exact and permanent equality of man and woman, and the greater power and capacity of woman in the creative functions is established as a law of nature, will vice disappear." H. L. K. S.

A Hand Book of Infant Feeding. By LAWRENCE T. ROYSTER, M. D. Attending physician, Bonney Home for Girls and Foundling Ward of the Norfolk Society for Prevention of Cruelty to Children, etc. Cloth. 142 pp. Illustrated. C. V. Mosby Co., St. Louis, Mo. 1916.

This is a small hand book of 142 pages. intended to supply the family physician with the scientific data underlying the modern methods of infant feeding. As such, it would be a great help as the matter is presented in a very compact and succinct form. It is unfortunate. however, that in a book written as an aid to general practitioners, the chapter on the preparation of formulae should contain so much algebra. When a physician is confronted with page after page of formulae he becomes discouraged, and although they may appear very simple on paper they are seldom followed in practice.

It would have been a wise procedure in a book of this character to have given emphasis to the importance of pasteurized milk. whereas the author simply mentions sterilization and pasteurization as useful only when the purity of the milk supply is in doubt. and states that when pure milk is assured neither is necessary. Some of the most severe epidemics of septic sore throat. scarlet fever and typhoid have come from dairies which are model in every particular and, where a case of undetected illness among the employees infected the milk.

Dr. John Lovett Morse of Boston wrote the chapter on the stools in infancy, which is a valuable addition to the work.

This little book will be welcomed by the busy practitioner.

H. L. K. S.

The Health-Care of the Growing Child. By Louis Fischer, M. D. Attending Physician in Charge of the Babies' Wards of Sydenham Hospital and to the Willard Parker and Riverside Hospitals, Former Instructor in Diseases of Children at the New York Post Graduate Medical School and Hospital, etc. Cloth. Pp. 328. Funk & Wagnalls Co.. New York and London. 1915.

The author has published a book on the "Health-Care of the Baby" which is very popular, and in this work he follows the same line dealing with the older child. The object of the book, as outlined in the preface, is to guide the mother when remote from her physician in looking after her sick child, and to advise her in cases of emergency until medical help can be procured. It is very neatly gotten up and there are some very good plates, although it would be difficult for a mother to diagnose a case of measles in her child from a study of the colored plate.

The first part consists of general hygiene and development of the child, dwelling on such topics as summer vacations, precocious children, characteristics and peculiarities of children. Part two takes up the question of nutrition and gives diets from three to six years. Part three is concerned with the catarrhal and communicable diseases, with a few words on appendicitis, malaria and rheumatism. Diseases of the skin and nervous system form part four, and in part five is contained much useful information regarding common affections and infections during childhood.

There is a very good index. A physician can safely recommend this book to his patients.

H. L. K. S.

A Practical Treatise on Infant Feeding and Allied Topics. By Harry Lowenburg, A. M., M. D. Cloth. 373 pp. Illustrated with 64 text engravings and 30 original full page plates, 11 of which are in colors. Publishers, F. A. Davis Company, Philadelphia. English Depot, Stanley Phillips, London. 1916.

This latest addition to the books on infant feeding will be welcomed by the medical profession. It is very well arranged as to subjects, etc., of good print, and with excellent plates and illustrations.

The first chapter is very properly devoted to breast feeding, and in it the author takes up the common causes of failure of the milk supply and how to prevent them and emphasizes a fact which should be more generally recognized by mothers, nurses and physicians, that few breast-fed babies escape indigestion during their first month of life and that "neither physician nor layman possess an inherent right to destroy a helpless babe's means of sustenance."

The author does not mention, in connection with deficient breast milk, the use of an artificial complemental and supplemental feeding suggested by Southworth, which is of such great value in prolonging lactation. The practice of giving the baby one artificial feeding a day from the sixth week on is not mentioned, although this one feeding a day is advised by a great many pediatricians. The author adheres to the short intervals of feeding both on the breast and cow's milk, and states that the feeding interval should be every two hours until the third month. Most pediatricians advise a three-hour interval from the very start, and some even prefer a four-hour interval.

The chapter on artificial feeding gives simple methods of preparing the milk, and the author very properly refers to it as "adaptation" of milk rather than as modification. In discussing artificial feeding he states that no text-book outline can make a successful infant feeder of the novice; what is necessary in each instance is "individualization and experience," and that "what is meat for one is poison for another, applies nowhere with such force as in the artificial feeding of infants."

The author has given chapters to spasmophilia and exudative diasthesis, which shows the influence of the German school of pediatrics. Thirty-nine pages are devoted to a consideration of pyloric stenosis, and this chapter is illustrated with nine figures and seventeen plates. A short chapter on the surgical treatment is written by Dr. John B. Deaver.

The author and his publishers are to be congratulated on the appearance of this book. H. L. K. S.

A Treatise on Clinical Medicine. By William Hanna Thomson, M. D., L.L. D., Physician to Roosevelt Hospital; Consulting Physician to the New York State Manhattan Hospitals for the Insane, and to the New York Red Cross Hospital; formerly Professor of the Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; ex-President of the New York Academy of Medicine, etc. Philadelphia and London: W. B. Saunders Company. 1914.

In the preface to this book the opening paragraph says: "A treatise of clinical medicine should chiefly consider those subjects which concern the physician when he deals with the sick. Knowledge gained in the laboratory or at autopsies, while indispensable, yet should in time precede all prescribing. *It is the condition of the living patient which then demands exclusive attention.*" (The italics are mine.)

Is not this a most astounding proposition? As if for a moment in our present day of high scientific ideals the comfort or the recovery of the patient at all concerned us, providing we can make our (laboratory) diagnosis and confirm it later with an autopsy.

Nevertheless there still remain a few of the "common or garden variety of physician" who believe that we should "hold fast that which is good" while we accept other things which also are of value, and these will welcome Dr. Thomson's work.

The author discusses in Part I the significance of the common, the ordinary and ofttimes neglected symptoms such as pain, emaciation, cough, dyspnea, edema and vomiting, all of which are gone into here, and which mean so much to the initiated and experienced practitioner. The closing chapter of this part considers remedies, and the use of non-medicinal and of medicinal remedies precedes vaccine and serum therapy.

In Part II there are five chapters on the infections, the closing one on infections by the bacillus coli being not the least interesting.

Part III contains twenty-two chapters and although it is entitled "Diseases of Special Tissues or Organs" it also deals with drug habits, mineral poisons and malignant diseases. Dr. Thomson says that throughout the book his aim is "to serve the physician while he is actively engaged in the performance of his professional duties," and surely no one of experience in medicine who carefully studies the pages of this treatise will fail to agree that he has succeeded. S. L. D.

State Board Questions and Answers. By R. MAX GOEPP, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Assistant Visiting Physician to the Philadelphia General Hospital; Associate in Clinical Medicine, Jefferson Medical College. Third edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1913.

As the writer said in reviewing the second edition of this surprising publication: "There must certainly be a demand for a book of this character or the publishers would not issue another edition," but even so it is a distinct disappointment to note who the publishers are. The W. B. Saunders Company are wont to pride themselves (in their advertising matter) on the highly scientific character of their publications, on their devotion to the work of elevating the medical mind through the very superior grade of their output of medical books, yet here we have rapidly succeeding editions of a more than seven hundred page book devoted exclusively to what? The cause of higher education, of scientific medicine? No, to the sacred cause of "getting by;" to helping the ignorant, the unlearned, the incompetent "put one over" on the trusting American public and add another to the many reasons for the rise of the osteopath, the chiropractor and the Christian scientist.

There are but few changes from the second edition, mostly the addition of some questions. There seems to be no doubt but that any one who has use for a book of this kind will find Dr. Goepp's efforts most helpful to him.

S. L. D.

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Edited by Frances K. Ray

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VOL. XXXVII JULY, 1916 No. 8

ALBANY MEDICAL ANNALS

Original Communications

AURICULAR FIBRILLATION: ITS RECOGNITION AND TREATMENT.

Read at the April, 1916, meeting of the Saranac Lake Medical Society.

By HERMON C. GORDINIER, A. M., M. D.,

Professor of Medicine at the Albany Medical College; Physician to the Samaritan Hospital, Troy, N. Y.

The object of this paper is to direct attention to the most common type of cardiac arrhythmia, auricular fibrillation, and to discuss the value of the graphic method of registration in its diagnosis.

No subject in clinical medicine has received so much attention as the study of the graphic method.

Cushny says, "That although the study of the pulse had extended back as far as medical history, more progress has been made in certain directions during the last fifteen years than in the previous century." This has been made possible by the pioneer work done by MacKenzie, Wenckenbach, Hering, Ritchie and Lewis.

The graphic method enables one to understand the exact workings of the heart and therefore is a distinct help in determining from a prognostic standpoint the future possibilities of the patient as well as being a definite guide to proper treatment. In addition it is a most fascinating study as it enables one to exactly record the condition of the patient's heart from time to time.

Neither the sphygmograph or polygraph is, as has been said of them, a pure mechanical toy for the purpose of amusing the patient, or suiting the fancy of the aesthetic physician, but they are instruments of precision, whose tracings when properly prepared and interpreted are of scientific value in determining the exact condition of the left and right sides of the heart, which are beyond the reach or interpretation of the ordinary methods of the careful and painstaking physician.

Twenty years ago the discovery of a valvular murmur, dynamic or organic in nature, led in many instances to giving a hopeless prognosis resulting not only in disastrously upsetting the mental equilibrium of the patient, but to the administration of a large number of useless cardiac drugs. On the other hand the inability to discover a cardiac murmur led often to the opinion that the heart was normal in patients whose myocardium may have been badly degenerated.

We now keenly recognize the import of the myocardium in maintaining the circulation and the rôle its exhausted fibres play in the production of heart failure, and give but little credence to the presence of valvular murmurs, regardless of their quality or seat of origin, providing the heart muscle is maintaining in a normal manner the circulation.

Gaskell in 1883 first showed in the heart of the tortoise, that its automatic rhythm originated in the muscle tissue itself and explained the fact that the contraction wave started in the sinus by the peculiar character of the muscle in that part of the heart. He states that the sequence to contraction of ventricle to the auricle is not due to separate stimuli of nerve fibres from sinus to ventricle, but to the fact that the waves of excitation arising at the sinus pass directly from the fibres of the auricle to the ventricle through the muscle fibres of the auriculo-ventricular groove.

He thus not only foreshadowed but actually paved the way to the discovery by Kent and His, Jr., of the bridge of connection between the auricle and ventricles, "the muscle bundle," that has received their conjoint name.

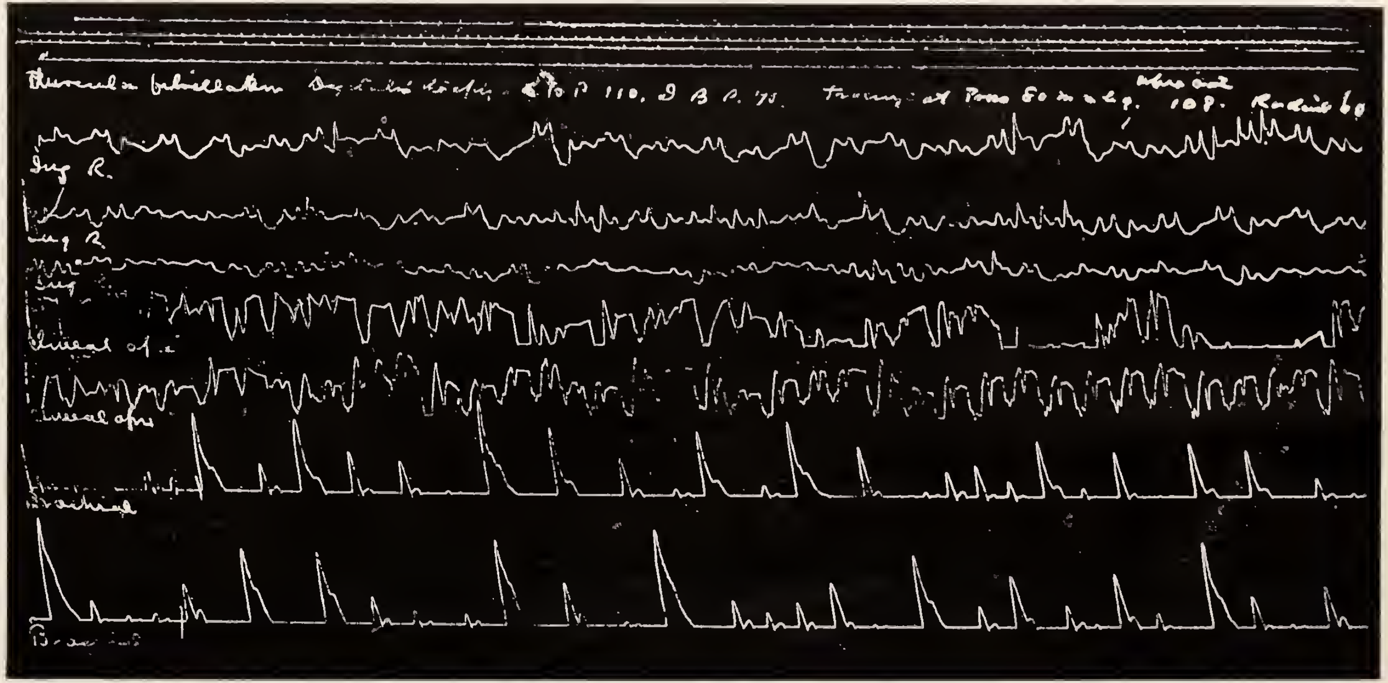
We now know from the anatomical studies of Keith, Flack and Tawara that this bundle forms a direct communication with the sino-auricular node of Keith and Flack, or pace maker of the heart, as Lewis has termed it, through its origin at the right coronary sinus from the auriculo-ventricular node of Tawara, thus completing a definite sino-ventricular conduction system which serves to convey impulses or waves of contraction from the sinus node through the auricles to the ventricles; the automatic rhythm of the heart is greatest at the sinus node and gradually diminishes from above downward; the normal rhythm of the heart, consisting of a regular sequence of beats so that the auricular and ventricular contractions fall with the proper time relations to each other.

Stannius, Gaskell, Englemann, Bowditch and Marey have shown that the heart muscle has the power of rhythmicity—*i. e.*, can originate its own impulses, its fibres being excitable, and are capable of receiving a stimulus; that they convey impulses from fibre to fibre, that they respond to a stimulus slight or great by a maximum contraction, and that during this period of contraction the heart muscle passes into a refractory state in which it is unexcitable; they also possess a high degree of tonicity—that is, they remain in a moderate degree of contraction when active stimulation has ceased.

The myocardium therefore possesses the following important functions: first, stimulus production; second, excitability; third, contractility; fourth, conductivity; and fifth, tonicity.

Most if not all of the aberrant functioning of the heart muscle is due to defects of one or more of its normal functionings, and such abnormal action may be determined by the aid of the graphic method. The following are more common types of arrhythmia, sinus tachycordia and sinus; bradycardia: juvenile or youthful arrhythmia; auricular fibrillation; extra-systoles, auricular, ventricular or nodal in type; paroxysmal tachycardia, auricular or ventricular; different degrees of diminution of conductivity, sino-auricular block, widening of the A. C. interval from the normal 1/5″ to 2/5″, or 3/5″, partial or complete heart block; auricular flutter, and clinical alternation.

Cardiac arrhythmia, manifested by gross irregularity of the radial pulse, has been discussed for a long period, and its association with mitral valve disease, especially stenosis of that orifice, has received critical study by many of the earlier observers, and especially by Marey, Reigel and Sommerbradt, who, with the aid of the sphygmograph, studied with great care tracings obtained from the irregularity of mitral stenosis, and while there



Auricular Fibrillation

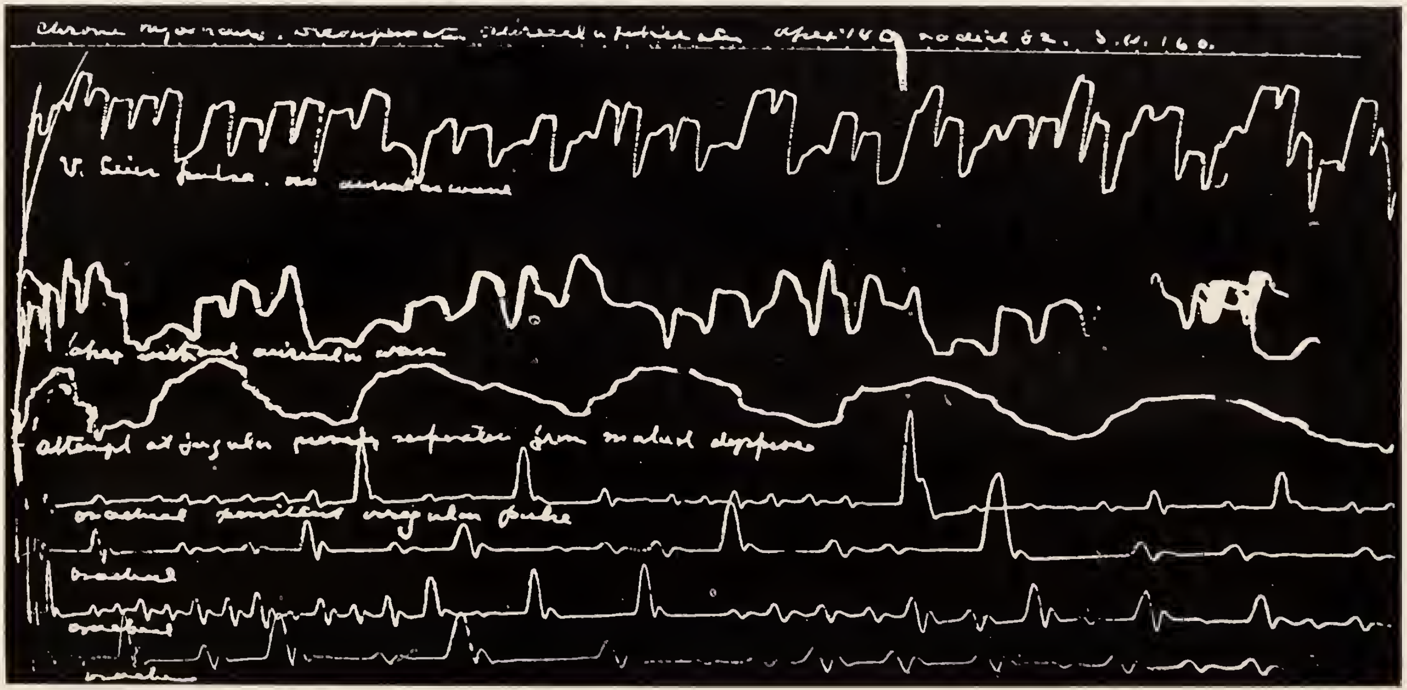
Ventricular or positive venous pulse; absent "a" waves; "f." wavelets in diastolic period of phlebogram.

Absent "a" waves in cardiogram; Gross irregularity of brachial.

Note fibrillating wavelets in diastolic portion of phlebogram.

can be no doubt that their tracings represented typical auricular fibrillation, such an interpretation was not dreamed of by them. It is interesting here to note that Reigel was the first observer to obtain graphic records of the positive systolic or ventricular type of venous pulse. Although Bamberger had noted this condition previously, he obtained no records of its movements. He believed, however, that it was due to free tricuspid regurgitation. It was not until 1902, when Mackenzie's great work appeared on the study of the pulse, that the true relation between the two phenomena, gross irregularity of the pulse and systolic jugular pulsation, was correctly appreciated. It is therefore to Mackenzie that we owe the definite correlation of the two phenomena, gross cardiac irregularity and the systolic venous movement, to which he gave the name of the positive or ventricular type of venous pulse in contradistinction to the normal or auricular type. Mackenzie recognized the frequent association, and was the first to suggest that they were due to complete inaction of the right auricle from paralytic over-distension. In 1903 Hering described the pulse irregularity more in detail and gave it the name pulsus irregularis perpetuus. In 1906 Hering in an exhaustive paper on this subject, was able to confirm Mackenzie's previous observation of the combination with this perpetual pulse irregularity, of the ventricular type of jugular pulsation.

In a later contribution, 1904-1905, based upon the study of 500 cases, Mackenzie brought forward many new and important clinical facts, the most noteworthy of which, contrary to his first opinion, that the auricle was not paralyzed but showed a certain degree of activity, auricular activity was assumed, because at autopsy on several of these cases the auricles were found hypertrophied; and secondly, because in certain cases presenting this type of arrhythmia the auricles later assumed their normal rhythm. He showed in this paper that in all cases of complete irregularity of the heart there is an entire absence of the signs of normal auricular activity. Mackenzie believed and taught that in most cases the seat of this new abnormal rhythm was in the junctional tissue, lying between the right auricle and right ventricle (auriculo-ventricular node of Tawara) and he con-

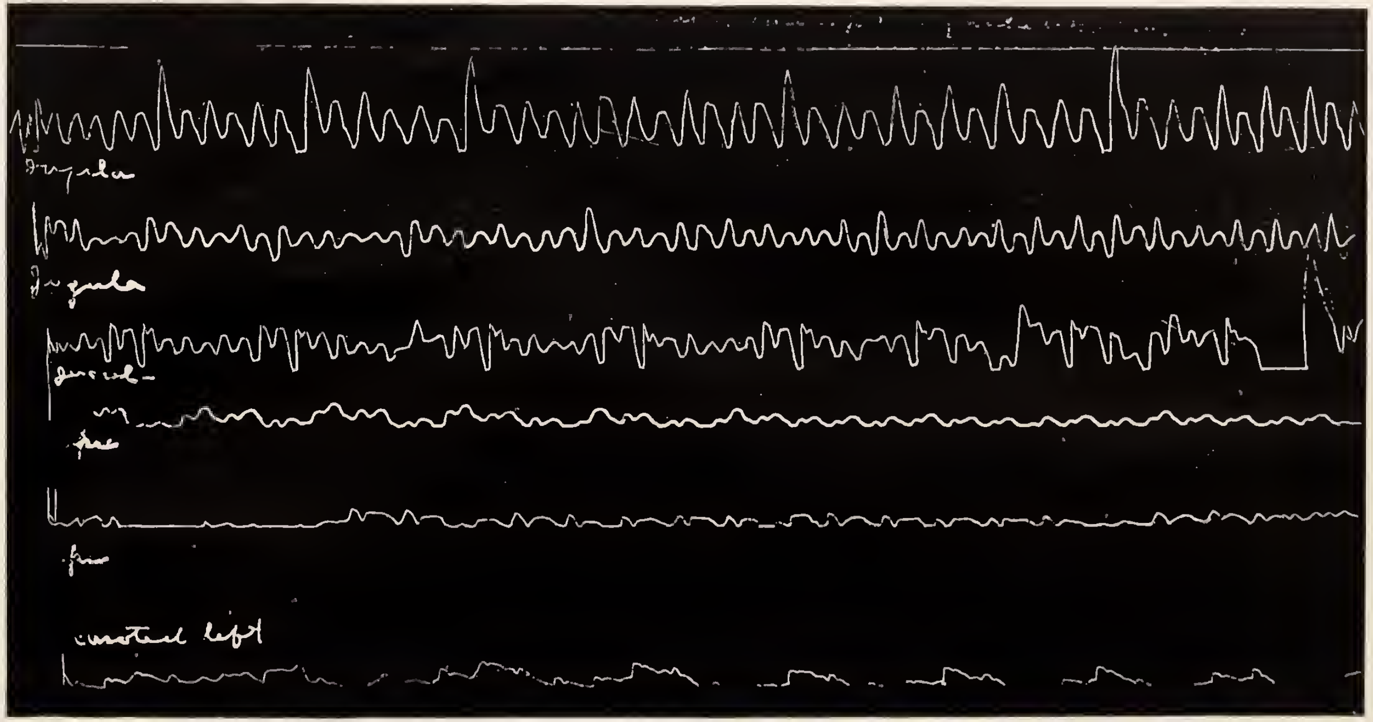

Chronic myocarditis. Decompensation. Auricular fibrillation. Apex 140 radial 82. B.P. 160.
V. liver pulse. no auricular wave
Apex without auricular wave
radial
apex
radial

Auricular Fibrillation

Cardio-sclerosis.
Chronic myocarditis.
Decompensation.

Pulse deficit.
Ventricular type of venous pulse.
Positive liver pulse.

ceived the idea of the simultaneous contraction of the auricle and ventricle in response to impulses from this source, and thus tried to explain the absence of every sign of normal auricular activity, which he had shown to be one of the chief features of this type of irregularity. In 1907-1908 Mackenzie adopted this hypothesis and held that the auriculo-ventricular node was the seat of disturbance in all cases of complete irregularity. In the first edition of his epoch-making book on diseases of the heart, he described this condition as nodal arrhythmia. In the last edition of his book on the heart he states that Prof. Cushny was the first to suggest that auricular fibrillation similar to that observed by experiments on animals might be a factor of clinical importance in the interpretation of cases of nodal arrhythmia. In 1906 Cushny and Edwards drew attention to the close resemblance to radial tracings from a case of paroxysmal irregularity in the human subject to the tracings obtained from a dog, who had undergone experimental auricular fibrillation from faradization of its auricle. Lewis in 1909, who took graphic records of both the venous and arterial pulse in animals suffering from experimental fibrillation, found that in the advent of auricular-fibrillation the arterial pulse immediately became irregular, and the venous pulse changed from the normal auricular type to the ventricular type. Lewis, Rothberger and Winterberg had independently in the same year drawn attention to the fact that in cases presenting clinically the pulsus irregularis perpetuus, the electro-cardiograms were typical of that of auricular fibrillation. From the comparison of polygraphic curves from the human and those obtained from animals suffering from induced auricular fibrillation, together with a comparison from the same source of the infinitely more accurate electro-cardiograms, seems to have proven beyond doubt that this form of arrhythmia characterized by short or long periods of persistent irregularity of the pulse, and the positive ventricular type of jugular pulse has, as its causative factor, auricular fibrillation. Contrary to this opinion are those who, according to Lewis, hold that it is inconceivable that the heart should remain in this state for long periods. Janowski has, however, recorded a case of complete irregularity lasting five and



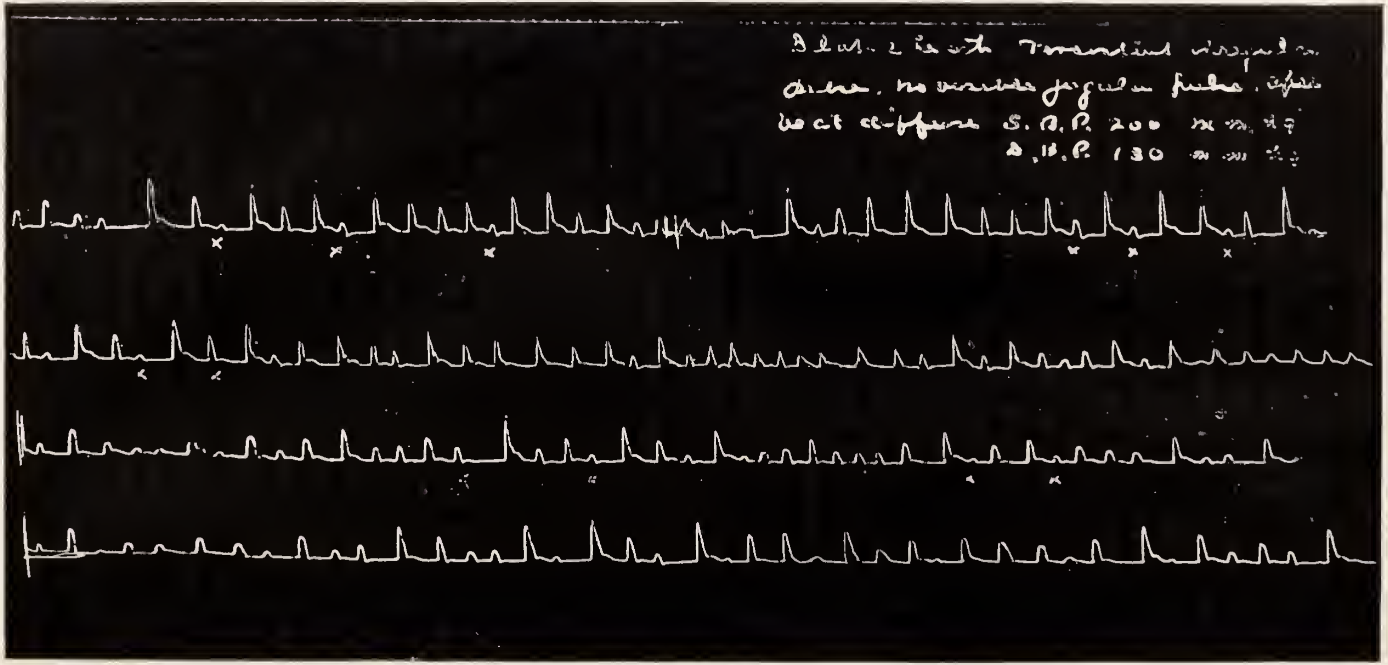
AURICULAR FIBRILLATION

Ventricular form of venous pulse. Absent "a" wave in cardiogram.

one-half years, and Mackenzie has followed several cases for ten years or more. While it is true that fibrillation of the ventricle is accompanied by rapid death from ventricular standstill or asystole, the auricles are not so indispensable to the circulation of the blood, but may be regarded, apart from setting the time for the normal cardiac rhythm, as temporary reservoirs, which accommodate the blood to the heart during ventricular systole. The large and distensible veins are perfectly competent for serving for a time compensatorily this function, and the resulting disturbance of the general circulation is not remarkable. Abundant clinical proof exists that the normal auricular activity is in abeyance in a large number of these patients, in whom the peripheral circulation, while irregular, is not especially hampered, and auricular fibrillation may last hours in dogs, and yet the blood flow is fair throughout.

Definition.—Auricular fibrillation may be defined as that form of abnormal rhythm or arrhythmia, in which the normal sinus rhythm is replaced by innumerable stimuli, excited by multiple irritable foci throughout the right auricle; the auricle early losing its normal co-ordinate contraction as a whole or in part, and rapidly becomes ballooned or over-distended in an extreme diastolic position. The only auricular activity remaining being multiple individual muscle fibre contractions, which cause a general and continuous fibrillation or tremor, fine or coarse, of the musculature of the auricles, resembling closely the tremor often observed in the tongue, or facial muscles of patients suffering from chronic bulbar paralysis, or in the skeletal muscles of cases of progressive spinal muscular atrophy. The ventricular contractions remain co-ordinate, but their rhythm becomes extremely irregular owing to irritation from showers of stimuli passing from the auricle over the bundle of Kent-His. It is in response to these numerous and bizarre stimuli that the perpetual attacks of irregularity of both the arterial and venous pulses are due.

The recognition clinically of auricular fibrillation was a most brilliant achievement, and it is but another example of the great service which physiological experimentation has rendered to clinical medicine. This form of arrhythmia, while perhaps the



AURICULAR FIBRILLATION

Dilatation of heart.
Hypertension.

Systolic blood pressure 200.
Diastolic blood pressure 130.

most important clinically, is also the most frequently met with of the various types of cardiac irregularity, and although it presents a perfectly definite symptom complex and is easy of recognition, but few physicians are aware of its great frequency or its importance from the standpoint of diagnosis, prognosis, and treatment. It is associated with, or directly responsible for, at least 60 per cent. or 70 per cent. of cases of serious heart failure. It is more frequently associated with mitral stenosis than any other form of valvular defect, occurring in about 52 per cent. of Lewis' series. In this particular lesion the strain upon the left auricle is, contrary to the intermittent effect upon the auricle of mitral regurgitation, permanent, and the auricle becomes dilated and thin-walled, and hence the musculature is very prone to fibrillate. Apart from mitral stenosis, fibrillation is most often witnessed in connection with the myocardial degeneration, following atheroma of the aorta, coronary artery disease, general arteriosclerosis, or secondary to chronic Bright's disease. Fibrillation probably occurs at all ages, but has rarely been observed before the first decade. Independent of rheumatism, its highest incidence is between sixty and seventy years of age, when myocardial and arterial changes have reached their limit. The cases directly due to rheumatism are most frequently observed between the second and third decade. While this condition is much more prevalent in the male, the type associated with mitral stenosis is quite as frequently observed among women. Of the rheumatic cases in Lewis' series, 46 were in males and 41 in females. Although rheumatic infection and its consequences are responsible for a large number of cases, fibrillation has been observed in other infections, more notably in pneumonia, influenza, diphtheria and streptococcic endocarditis.

PATHOLOGY.

From a pathological standpoint it is interesting to know that auricular fibrillation is commonly associated with valvular diseases, especially mitral stenosis, myocardial degeneration, enlargement of the whole heart, cardiac dilation and dilatation, with or without hypertrophy of the auricles. Cowan, Fleming and Kennedy found, at autopsy in 14 cases, the sino-auricular node normal in three cases, the auriculo-ventricular node normal in nine, His' bundle normal in eight. The most frequent microscopic finding has been a general or focal fibrosis of the auricular musculature, of a delicate or severe grade, with round-celled infiltration, and atrophy of the muscle bundles. All the above-described changes have been found unassociated with fibrillation, and fibrillation has occurred where no such lesions existed. While it is true that certain organic changes must be the exciting factor of this haphazard stimulus production, it is also true that up to the present time no sufficient pathologic explanation has been forthcoming.

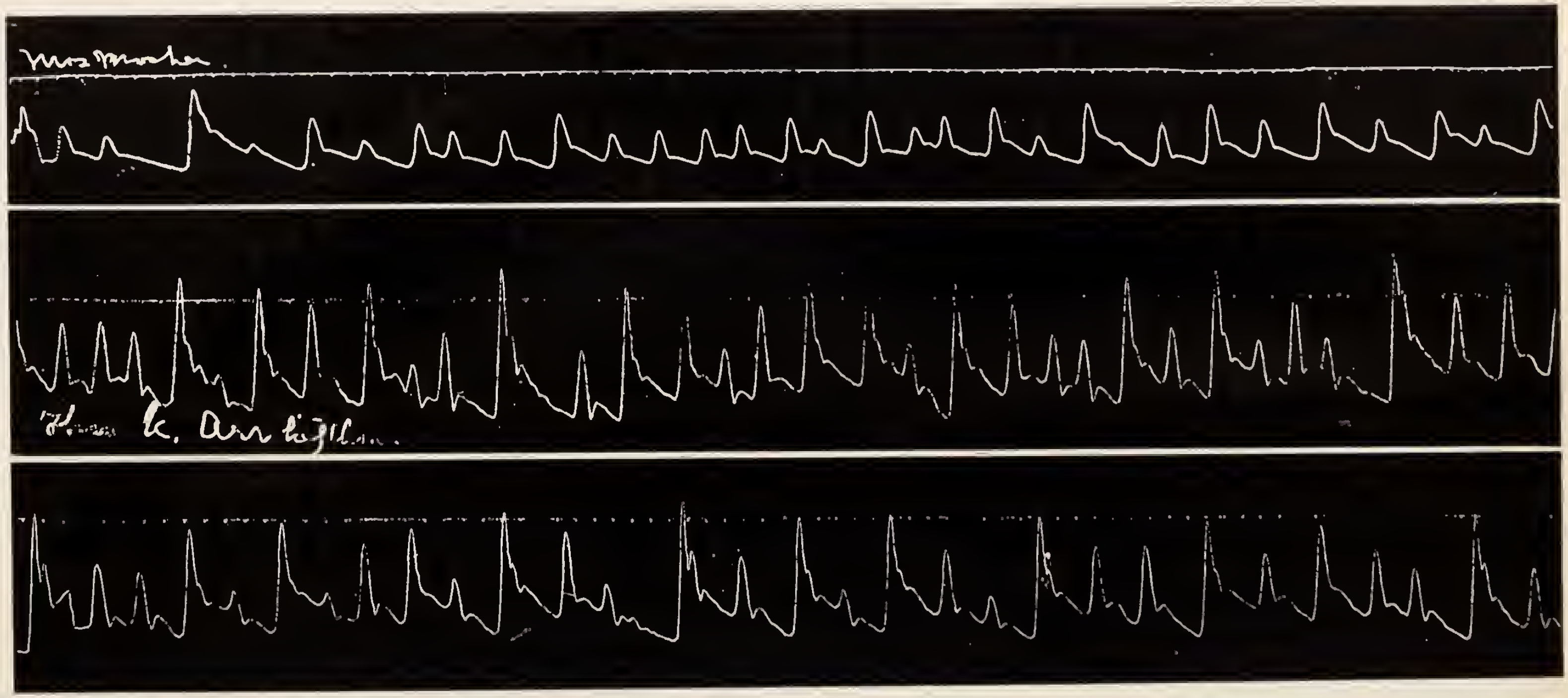
SYMPTOMATOLOGY.

In explanation of the symptoms of this interesting complex two important facts must be emphasized. First, that the coordinate or rhythmical activity of the auricles is lost, and they remain in an extreme diastolic position, unable to contract in toto or partially, but whose musculature is in a condition of unrest or fibrillation. Second, that the ventricles are being constantly excited with showers of bizarre impulses, which cause their great irregularity of rhythm and force. This tumultuous irregularity of ventricular rhythm is easily discerned with the ear or stethoscope applied over the impulse. As a result of this abnormal ventricular rhythm the arterial and venous pulse is completely irregular and usually rapid in rate. If one feels the radial artery he will be astounded not only by this extreme irregularity but by the great differences in the character of each individual beat. He will discern beats which are large and those which are small in amplitude or volume with long or short pauses between them; or the pulse may be temporarily missed at the wrist.

There appears to be no definite relation between the amplitude of the beat and the length of the diastolic pause; while one may observe beats of large size preceded by long diastolic intervals, one quite as often observes beats of small amplitude, following intervals equally as long, or the opposite may occur, short intervals being succeeded by large beats or long intervals by smaller ones. This medley of beats as regards volume, strength and rate is very characteristic, and can be beautifully demonstrated by taking a short strip of the radial curve with a Dudgeon sphygmograph, when the differences in size, shape, timing, and the inequality in spacing between the beats can be seen. While the pulse in this condition is usually rapid in rate, it may be distinctly slow, counts varying from 50 to 70 not being at all uncommon. This so-called false bradycardia, a true pulse deficit, is due to feeble ventricular contractions (from diminution of contractility), the intra-ventricular pressure, often being insufficient to overcome the aortic, fails to lift the aortic valve, or if it does lift it, the pulse waves are so feeble that they fall short of the wrist. This condition can be easily and accurately determined by comparing simultaneously the radial rate with that of the apex beat, the latter being recorded either by palpation of the apex or by auscultating the first sound. The deficit thus found between the clinical apex and arterial pulse is not only of great diagnostic significance in the recognition of auricular fibrillation, but is a guide as to its severity and proper treatment. As this deficit is so simple to determine and of such significance from a diagnostic and therapeutic viewpoint, it should always be observed.

The venous pulse is as noteworthy as is the arterial, indicating as it does the condition of the intra-auricular pressure. It presents waves that are as significant as those of the arterial pulse. The jugular veins usually stand out very prominently from over-distension, and show a wide venous movement coincident with the carotid pulse, the auricular wave is absent, and the jugular wave is of the systolic, positive or ventricular type, and is often quite irregular. If we take for comparison simultaneous curves from the jugular, carotid, radial, or apex, we will find that the most prominent and rapid changes occur in systole.

The systolic waves often present a high upstroke, a broad summit, with one or more dips and a gradual or sudden decline. In some tracings just after the completion of the systole—*i. e.*, in early diastole—a secondary wave may be seen. This wave was observed coincidently by Hirshfelder and Gibson and named, by the former the H wave, and by the latter the B wave.



Jaquet Instrument

Auricular fibrillation showing the gross irregularity of the radial pulse, differences in volume, size and spacing.

They believed it to be the result of increase of the intra-auricular pressure due to the sudden closure of the tricuspid valve. In addition to the long systolic waves, others equally characteristic of fibrillation occur in diastole. They were first pointed out by Wenckenbach, and rarely occur save when the pulse rate is slowed. They are multiple small wavelets of but slight amplitude, ranging in rate from 250 to 500 or more per minute. For convenience and to indicate their import they are designated the " F " wavelets. Tracings taken from the clinical apex are also valuable from the standpoint of diagnosis, as they show at the beginning of the upstroke the absence of the normal auricular wave, and not rarely in the diastolic portion of the cardiogram wavelets appear similar to those already described as occurring in the same phase of the jugular tracings. While these wavelets in the venous pulse indicate fibrillation of the right auricle, those occurring in the cardiogram indicate fibrillation of the left auricle. Further confirmation of the absence of normal auricular action is the presence of a true systolic liver pulsation, which may be recorded graphically with a large disc placed over the pulsating liver. This type of pulse is not at all rare and will be found, if sought after, in a goodly number of these cases. Exceedingly interesting in this connection, in cases of fibrillation, associated with mitral stenosis, is to note in many instances with the inception of this rhythm, the fading away and complete disappearance of the characteristic presystolic murmur and thrill, and their reappearance when normal auricular activity is again restored. During the time of fibrillation we often hear in these cases either a short or long diastolic murmur, very soft in quality, which usually ends abruptly with a sharply accentuated first sound.

The most striking feature, according to Lewis, of electrocardiographic curves taken from cases of clinical or experimental fibrillation, is the retention of the normal ventricular complex, and the absence (P) of the regular presystolic or auricular variation waves which accompanies all normal heart beats, and the presence of that which replaces it, namely, a number of irregular oscillations in diastole varying in form and amplitude due to the fibrillating auricles. This special type of electro-cardiogram occurs in no other condition save that of auricular fibrillation.

I will detain you but a short time in enumerating the subjective and other objective symptoms that are usually associated with auricular fibrillation. They are those commonly observed with moderate or severe cardiac failure with its associated arterial anemia, general venous stasis, and usually low blood pressure; such as dyspnoea, cough, palpitation, cyanosis, praecordial distress, great general weakness, and later on orthopnea, edema of the extremities, fluid in the cavities, enlarged, often pulsating, liver, and enlargement of the spleen, recurring attacks of pulmonary edema, and infarcts of various organs; in other words, the symptoms of moderately severe or grave myocardial exhaustion, together with the physical signs of a greatly dilated heart. It may be stated, however, that auricular fibrillation may continue for long periods without being accompanied by the above-mentioned symptoms, they being dependent on the degree of efficiency or reserve of the heart muscle.

Diagnosis.

The diagnosis of auricular fibrillation is for the most part comparatively simple, the gross irregularity of the ventricular action being indicated at the wrist in a decided difference between each beat as regards tension, volume, spacing, and timing. This irregularity of the arterial pulse taken in conjunction with the presence of a definite deficit or incongruity between the rate of the clinical apex and that of the radial artery, the radial rate being much slower than that of the apex, makes the diagnosis almost positive. In cases of fibrillation coming on rather abruptly in individuals suffering with mitral stenosis, the disappearance of the characteristic crescendo type of presystolic murmur and the equally characteristic thrill and their replacement by a murmur softer in quality and generally long drawn out occupying the entire diastole, or mid-diastolic in time and unaccompanied by a thrill, is also highly suggestive, if not absolutely diagnostic, of this condition. As before mentioned, in cases of fibrillation with mitral stenosis, where the fibrillation is of short duration as it disappears and normal auricular activity is re-established, one is able to note by auscultation the reappearance of the previously lost presystolic murmur, and to palpate the returning strictly localized presystolic thrill. These signs are ordinarily quite sufficient to establish the diagnosis of auricular fibrillation. They may be corroborated, however, by taking short stretches of polygraphic or electro-cardiographic curves, when the disappearance of auricular activity and the presence of fibrillation will be indicated by the absence of the " A " wave in the phlebo- and cardio-gram and the " P " variation in the electro-cardiograms, and the appearance of a true systolic venous pulse in the jugulars, and in tracings obtained from the pulsating liver, together with the presence of multiple wavelets of small amplitude in the diastolic period of tracings taken from the jugulars and apex and in the electro-cardiograms. Clinical alternation is sometimes mistaken for fibrillation, inasmuch as in some cases of alternation the rhythmical irregularity in volume so characteristic of the arterial pulse creates waves so small in amplitude that the palpating finger fails to appreciate the difference in volume, and hence they are confused with the pulse irregularity of cases of fibrillation. Short strips of radial curves will dispel all doubt as to their true nature, as the radiograms in alternation show well-formed waves of large and small amplitude following each other in regular succession, the spacing between them being about equi-distant, or the long time interval existing between waves of long and small amplitude rather than as in ventricular extra-systoles between the small and large waves.

Paroxysmal tachycardia usually comes on very abruptly, the rate varying between 120 and 250 per minute. The rhythm is usually quite regular throughout the attack, the rate of the apex and radial being the same. The paroxysm lasts for from a few seconds to several hours or days and ends as quickly as it began.

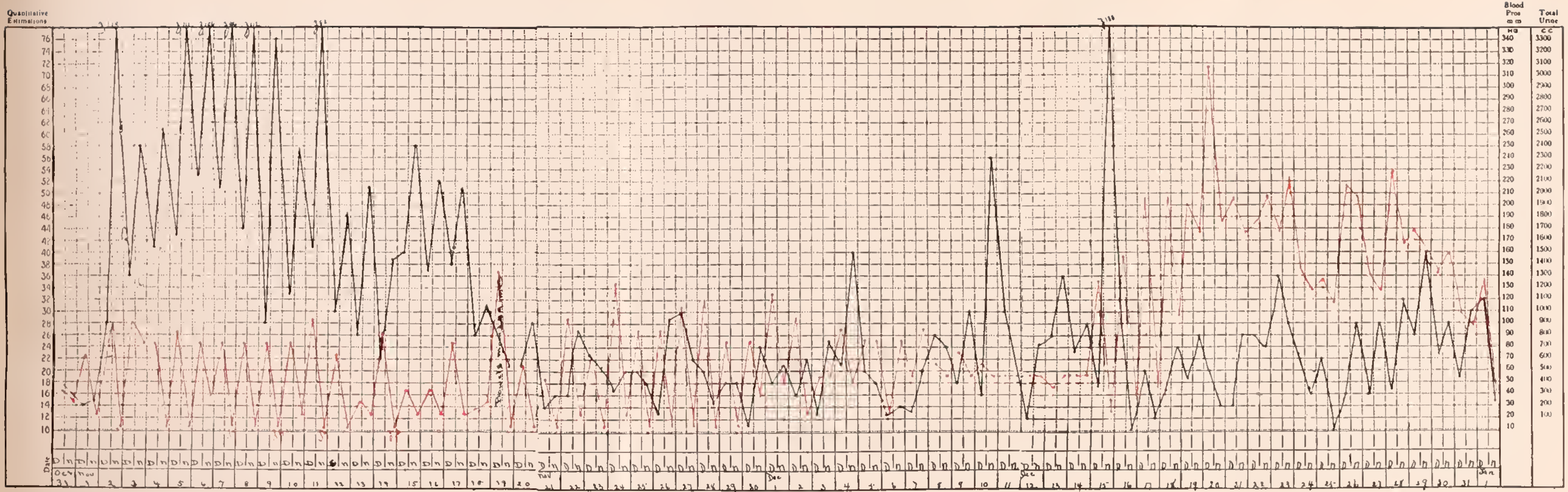
Auricular flutter resembles paroxysmal tachycardia save that when the former rhythm is established it lasts longer and may be permanent. The auricular rate may exceed many times that of the ventricular, but it usually beats twice or thrice as rapid. So that in this condition of flutter acceleration of rate and partial heart block are combined. The distinguishing features between auricular flutter and fibrillation are that in most instances of the former condition the ventricular action and radial pulse are usually perfectly regular, and the "P" wave in the electrocardiogram is present but altered in form, whereas in the latter the ventricular action is tumultuous and the radial pulse grossly irregular, and no evidence of auricular activity is present.

PROGNOSIS.

From the standpoint of prognosis the recognition of the inception of this abnormal rhythm is of great importance. It is nearly always associated with grave changes of the myocardium, and its presence adds greatly to the load of an already over-burdened heart, whose reserve is thereby made more or less limited, both by increasing its irritability and conductivity and by impairing its contractility, and thus diminishing its tonicity. While a few cases of auricular fibrillation whose ventricular rates are moderately slow and whose cardiac reserve is not greatly impaired, may live fairly comfortable for months or years, the great majority in whom this rhythm is perpetual are short-lived. Ventricular rates which are maintained above 120, unless responsive to proper therapy, go on to gradual or speedy cardiac exhaustion, with great dilatation, and all the concomitant symptoms of an unrelieved decompensation and death. It is probable that the immediate cause of death in many of these cases is asystole from the sudden inception of ventricular fibrillation. In determining the prognosis in a given case of auricular fibrillation it is therefore necessary to weigh carefully the subjective and objective symptoms, as well as to have a proper appreciation of the extent of the damage to the heart muscle. As indicated by the deficit between the rate of the apex and that of the radial artery; the amount of cardiac dilation, the change in the quality and pitch of the heart sounds, and associated valvular murmurs, as well as to the condition of the arteries and kidneys, and the ability of the heart muscle to respond to active digitalis therapy.

TREATMENT.

No form of cardiac disorder is more amenable to proper digitalis medication than the one before us for discussion. If we



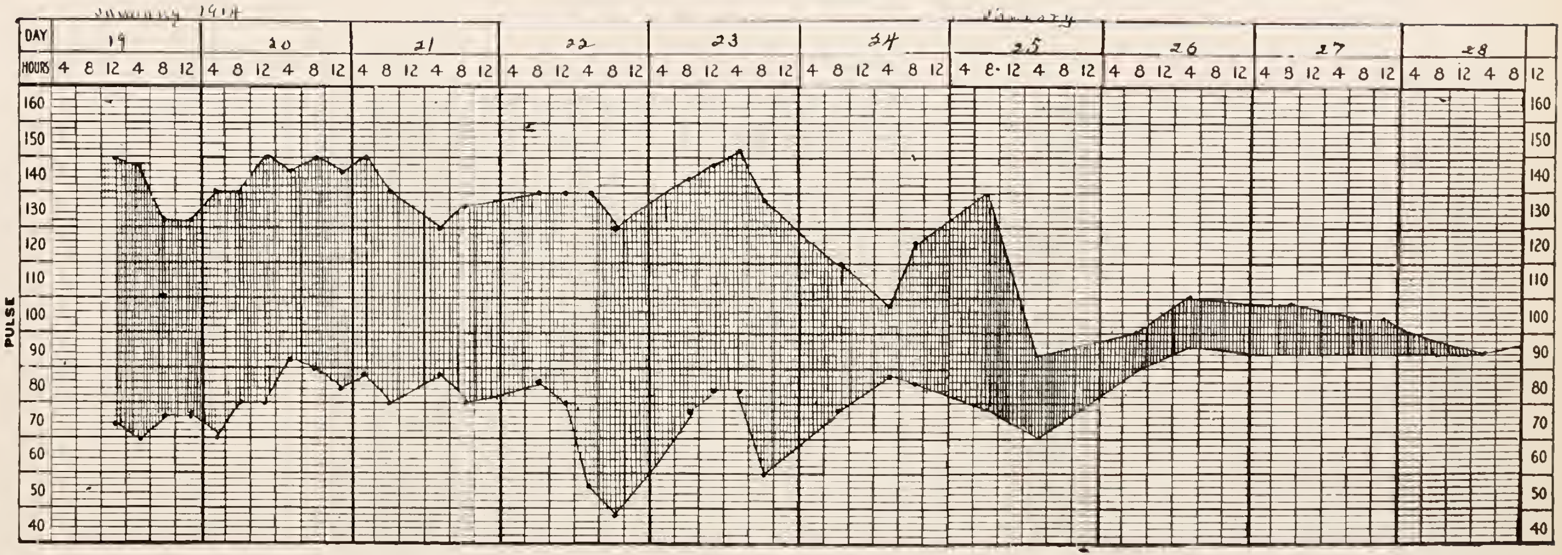
Black Ink - Out put (urine)
Red Ink - In take (fluids)

SAMARITAN HOSPITAL

Chronic nephritis; myocardial degeneration; sudden onset of fibrillation with general anasarca. Digitalis therapy; enormous urinary output until edema entirely disappeared.

will pause for a moment to review the salient features of this disordered cardiac mechanism, we will find ample justification for the above statement. For with the inception of this abnormal rhythm the whole myocardium is rendered more irritable from over-excitability, the result of innumerable stimuli constantly flowing from the auricles to the ventricles over His's bundle. This constant increased conductivity rapidly exhausts the two most important functions of the heart muscle, contractility and tonicity. We have been taught both from animal experiments and clinical studies that digitalis reduces cardiac rate by vagus stimulation through its effects on the cardio-inhibitory centers in the oblongata, as this action may be prohibited by blocking the vagus impulses through the administration of atropine. It has also been known for long that this drug has a selective action directly on the muscle fibers of the heart independent of their nerve supply, improving in marked degree the functions of contractility and tonicity. In addition we know from polygraphic and electro-cardiographic studies that one of the earliest effects of digitalis is to delay conductivity through the bundle of His by increasing the auricular-ventricular interval, causing, if the action is pushed, definite heart block. This action of the drug is valuable in fibrillation by reducing the number of impulses from the auricles to the ventricles, thus relieving their irregularity, slowing their rate and increasing their period of rest, thereby permitting a proper filling of the ventricular chambers. It also strengthens their systolic contractions, thus relieving them of their residual blood and increasing each systolic output, with ofttimes complete relief of the general venous stasis.

In laboratory animals and healthy men digitalis increases blood pressure by constricting the small arteries through vasoconstrictor influences. On diseased hearts, however, great discrepancy of opinion exists as to whether such pressure effects ever occur. It seems reasonable to believe, especially in fibrillation with edema and low blood pressure, that such results occur, chiefly through its effects on improving the contractile force and tone of the heart muscle, thus improving the systolic output, thereby reducing the size of the dilated chambers by relieving them of their residual blood and permitting a better coronary arte-



Samaritan Hospital

Pulse and record chart.

Record of auricular fibrillation showing great myocardial exhaustion greatly improved with digitalis.

rial flow, thus improving the nutrition of the heart muscle. Its diuretic effect is not primarily renal but is doubtless due to its selective action in increasing the force and strength of the heart muscle, thus delivering to the kidneys a greater volume of blood, relieving their venous stasis, and relieving the general edema by producing active diuresis. Clinical experience teaches that when a good active preparation of digitalis fails to influence for good the strength of the heart, no increased urinary output occurs. Because of these well-known pharmacologic actions of the drug, we have in digitalis a most valued weapon, whereby we may relieve and prolong the lives of these unfortunate patients so that they may live months or years with comparative comfort, often being able to work at their usual vocations. The effects from the use of digitalis or allied drugs in fibrillation is oftentimes no less than marvelous, patients in immediate peril of death being relieved as if by magic; the deficit between the cardiac impulse and radial artery gradually ceasing, the dyspnoea and edema fast disappearing, the irregularity of rhythm and rapid rate quickly improving; and in the cases of fibrillation associated with mitral stenosis the presystolic murmur long since absent often reappearing with the improvement of the functioning of the auricles. The drug to be effectual must be used at first in doses sufficiently large to produce definite physiological effects, *i. e.,* distinct lessening of the irregularity and slowing of the pulse rate, the rate of apex and the radial pulse gradually becoming the same. When their rates reach seventy per minute it is wise to discontinue the drug for a few days, carefully watching the heart rate in the interval, and if it again becomes rapid, reaching ninety or more, then to give enough digitalis to keep it at about the normal rate, thus continuing the smaller doses over long periods of time, only ceasing when the rate keeps normal and no deficit occurs, or the drug produces some toxic effect, such as vomiting, severe headache, marked sinus irregularity, delayed conductivity, bigemina, or actual heart block. No drug of this series can in my judgment approach at all the good effects of an active preparation of digitalis. It is true that occasionally certain individuals seem to possess an idiosyncrasy for the drug and can take it neither by the mouth or subcutaneously.

In such patients the drug may be used intravenously or the substitution of strophanthus, squills, convallaria, adonis, or spartein, may be tried. My preference is either for a good tincture, a fresh infusion, or recently collected dried and compressed leaves. In endeavoring to bring prominently before you the great value of this drug in the treatment of fibrillation, I do not wish in those cases of fibrillation with edema to underrate the good that comes from absolute rest, restricted fluid intake, salt-free diet, and careful elimination, or in combination with digitalis of such diuretics that act upon healthy renal epithelium as caffeine, theobromine, *theocin-sodium acetate,* or agurin. These latter drugs should not be given in pure renal dropsy. I want also here to emphasize the fact that belladonna or atropine should never be administered in this condition, unless for some very definite reason such as the onset of a sudden fulminating attack of pulmonary oedema, as its action is to paralyze the peripheral terminations of the vagus nerve, thus accentuating the fibrillation.

In closing, just one other point, namely, the value of caffeine in overcoming digitalis arrhythmias that do not cease when the drug is discontinued.

Conclusions.

Auricular fibrillation is a definite clinical entity and is next to extra-systole the most common form of cardiac arrhythmia. It presents a complex of symptoms easy of recognition, the most notable of which are the following:

1. Tumultuous ventricular action and gross pulse irregularity.
2. The presence of the systolic or ventricular type of jugular and liver pulse.
3. A distinct deficit between the rate of the apex beat and that of the arterial pulse.
4. The absence of the auricular wave in the phlebo-, cardio- and electro-cardiogram.
5. The appearance in the diastolic period of the phlebo-, cardio- and electro-cardiograms of wavelets of fibrillation.
6. In the cases associated with mitral stenosis, the disappearance of the characteristic presystolic murmur and thrill and their reappearance when auricular activity is re-established, indicates auricular fibrillation.

7. The prognosis is dependent upon the ability of the myocardium to respond to active digitalis therapy.

8. No form of cardiac irregularity exists which is more amenable to proper digitalis therapy, the relief often coming speedily and lasting over long periods of time.

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BENDER HYGIENIC LABORATORY.

REPORT OF THE DIRECTOR FOR THE YEAR ENDING AUGUST 31, 1915.

BY ELLIS KELLERT, M. D.

To the Trustees of the Bender Hygienic Laboratory:

Gentlemen.—I have the honor to submit to you my report for the year ending August 31, 1915.

The close of the present year marks the twentieth anniversary of the activities of the Bender Hygienic Laboratory. With the building of this institution, great advances in scientific medicine were made possible in this community. Before long physicians from all parts of central New York availed themselves of the many advantages offered by the laboratory. As an institution for research, it quickly established a national reputation. The routine work rapidly increased from year to year, new diagnostic methods were instituted, and medical men with increasing frequency called upon the laboratory for the performance of those tests, without which the practice of modern medicine is impossible. The early affiliation of the laboratory with medical teaching and its activities in this direction, greatly enhanced its usefulness.

I. Organization.

Owing to my previous connection with the laboratory and familiarity with its various details, there was no interruption in the routine work when I assumed charge in August, 1914. The laboratory was found to be in excellent condition and such changes as have been made were for convenience and increased efficiency and not because of actual necessity.

During the past year the staff consisted of four medical and six non-medical members. Beginning December 15, 1914, an extra technician was engaged. This addition to the force was necessitated partly by the increase of city health work, particularly in the number of milk examinations, and partly by the work done for the medical college. The following changes in the staff have taken place: Dr. Walter C. Fox (A. M. C. 1911) resigned to enter upon practice of medicine at Fort Plain; Dr. Arthur Stein (A. M. C. 1912) resigned September 1, 1914, to become instructor in pathology at the University of Louisville, Kentucky; Dr. Wardner D. Ayer (A. M. C. 1910) re-entered the service of the laboratory during the months of September to June inclusive, when he resigned to become instructor in Histology and Embryology at the Syracuse University Medical College; Dr. Morris B. Beecroft (A. M. C. 1913) and Dr. George V. Genzmer (A. M. C. 1913) were appointed in June and July, respectively.

It is highly gratifying to have received for the present year no less than four applications for laboratory appointments, and two for the year 1916. These applications would seem to indicate a desire on the part of an increasing number of our graduates to obtain a more complete medical training. This tendency should be encouraged and it is to be regretted that funds are not available for doubling the medical staff of the laboratory. This would enable a larger number of men to receive the benefits of a thorough laboratory experience which is rapidly becoming fully as important as a post-graduate hospital year.

II. The Work of the Laboratory.

Beginning January 1, 1915, a new contract was entered into with the city of Albany binding the laboratory to make any examination within its scope at the request of the health officer.

The Widal reaction for the diagnosis of typhoid fever has been added to the list of tests performed for physicians of the city without charge. An outfit has been provided, consisting of a sterile glass pipette and needle in a sterile envelope, the whole enclosed in a larger manila envelope containing a printed slip for data. This outfit can be obtained at the laboratory or collecting stations within the city. The bulk of the work for the city at the present time consists in the examination of throat cultures, sputa, milk, and blood for the Widal reaction. It is to be hoped that before long the city health officials will see their way clear to add the Wassermann reaction to the other tests performed for the city, and furnish to physicians a proper container for collecting blood.[1]

The following tables will show the number of examinations made during the past two years. The tables for the year 1913 to 1914 are added at the request of the former director, Dr. H. S. Bernstein. The financial statement for this year will follow:

TABLE I

ROUTINE EXAMINATIONS MADE AT THE BENDER HYGIENIC LABORATORY FROM SEPTEMBER 1, 1913 TO AUGUST 31, 1914

	Albany Hospital	St. Peter's Hospital	Child's Hospital and St. Margaret's House	State Department of of Health	City Department of Health	Homeopathic Hospital	All Other Sources	Total
General bacteriological and clinico-pathological examinations	*3,112	269	20	2	3,877	274	1,700	9,254
Surgical specimens	1,511	424	45	1	......	129	259	2,369
Post-mortem examinations	14	3	8	......	......	2	22	49
Total	4,637	696	73	3	3,877	405	1,981	11,672

Corrected total number of specimens examined, 9,504.

* 2,168 should be subtracted from the bacteriological total for the Albany Hospital. This figure represents the diagnostic work, chiefly for Pavilion G, which is included under City Health Work.

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[1] In March 1916 outfits for collecting blood for the Wassermann reaction will be placed in the culture stations.

TABLE II

Special tests (included in table I) performed during the year 1913 to 1914:

Inoculation tests	63
Wassermann-Noguchi reactions	904
Blood cultures	36
Vaccines prepared	49
Milk examinations	366
Total	1,418

TABLE III

Routine Examinations Made at the Bender Hygienic Laboratory From September 1, 1914 to September 1, 1915

	Albany Hospital	St. Peter's Hospital	Child's Hospital and St. Margaret's House	City Department of Health	Homeopathic Hospital	All Other Sources	Total
General bacteriological and clinico-pathological examinations	*3,348	321	20	5,144	270	1,432	10,535
Surgical specimens	1,317	539	59	......	187	288	2,390
Post-mortem examinations	28	2	8	......	2	32	72
Total	4,693	862	87	5,144	459	1,752	12,997

Corrected total number of specimens examined, 10,575.

* 2,422 should be subtracted from the bacteriological total for the Albany Hospital. This figure represents the diagnostic work, chiefly for Pavilion G, which is included under City Health Work.

TABLE IV

Special tests (included in table III) performed during the year 1914 to 1915:

Inoculation tests	86
Wassermann-Noguchi reactions	1,153
Blood cultures	59
Autogenous vaccines prepared	58
Milk examinations	580
Total	1,936

Since January 1, 1915, four hundred and fifteen samples of milk have been examined for the city health department. The number of specimens of milk received to September 1st has proved much smaller than has been anticipated, for there are over 500 dairies supplying milk to the city. This is due to the limited time which the milk inspector has to collect specimens. A large increase is expected as soon as assistant milk inspectors are engaged.

The laboratory has been very active in its co-operation with the Albany Hospital. This institution has been liberally supplied with material for throat cultures, which are taken in the case of every infant or child entering the hospital. Owing to the examinations thus made, occasional diphtheria carriers are detected and their immediate isolation should prevent epidemics of diphtheria, thereby resulting in great saving to the hospital. It is hoped that a similar arrangement may be made in the case of typhoid fever patients, whose excreta should be examined to determine the presence of typhoid bacilli before the patients are discharged as cured.

It is customary to make brief mention of the more unusual cases met with during the year. A case of Bilharziosis occurring in a young woman from Porto Rico was diagnosed by examination of the faeces; a case of Streptococcus capsulatus meningitis; mega-colon; a case of diphtheria of the penis following circumcision; lipoma of the caecum; melanotic sarcoma of the small intestine producing intussusception; a case of amyloid tumor of the conjunctiva; traumatic rupture of the heart without injury to the chest wall; spontaneous rupture of the aorta; and an epidemic of molluscum contagiosum at the Brady Memorial Home.

The finding of a case of Bilharziosis in Albany brings up the subject of the occurrence of tropical diseases in this region. Because of the great increase in travel and communication between this and southern countries, such conditions as amoebiasis, hook-worm and parasitic diseases are found with increasing frequency. The laboratory is particularly interested in these cases and offers to physicians every aid in their detection.

During the past summer the building has been open to students and physicians who wished to obtain further laboratory instruction. Those who availed themselves of this opportunity were the following: Dr. E. F. Connally (A. M. C. 1910), Whitehall, who has become pathologist to the Troy City Hospital; Dr. E. L. Robbins (A. M. C. 1914); Mr. Carl Gebhard (A. M. C. 1915); Mr. Milton Aronowitz (A. M. C. 1917); Dr. Louis Gelb (College of Physicians and Surgeons, New York, 1908).

I wish to acknowledge services rendered by Mrs. Gerard Buschenhenke, and a donation of twenty dollars from Dr. A. J. Bedell for photographic supplies. The laboratory has also received from Dr. Albert Vander Veer a number of stereoscopic photographs illustrating pathological conditions. These photographs were made in 1868 and were intended for teaching purposes. It is rather interesting to note the efforts of the earlier workers in the Albany Medical College to make the teaching of medicine as practical as possible. I should like to mention in this connection that the laboratory possesses a complete photographic outfit, and members of the staff are ready at all times to photograph for physicians any unusual case or specimen.

III. Teaching.

During the year 1914-1915 the following laboratory courses were given for the students of the Albany Medical College:

Courses.	Hours per week.	
1. Histology and Embryology.....	5	Drs. Ayer and Beecroft.
2. Pathology and Bacteriology.....	12	Drs. Kellert, Ayer, Beecroft and Genzmer.
3. Anatomy and Pathology of the Nervous System	2½	Dr. Archambault.
4. Surgical Pathology (second year, for ½ year)	1	Dr. Beilby.
4. Surgical Pathology (third year, for ½ year)................	1	Dr. Bendell.
5. Clinical Pathology (for ½ year)	1	Drs. Kellert and Ayer.
6. Clinical Microscopy	2	Dr. Gorham.
7. Experimental Physiology	6	Mr. Knudson.
8. Experimental Pharmacology ...	2	Mr. Knudson.

It has been customary for the staff each year to prepare stained sections for use of students in the courses in histology and pathology. These slides were retained by the students as a permanent collection. This method involved not only great labor on our part, but also expense to the laboratory. After careful consideration, it appears to me that this plan entails great waste and only slight benefit. A majority of the students regard this material carelessly and make no effort to care for and preserve the collection. Few of the men retain any interest in their tissue preparations after graduation and the slides given them are soon lost or thrown away.

I believe that it would be to the advantage of the students and laboratory to provide a complete loan collection of slides illustrating all the normal and pathological conditions that are studied in our courses. These slides should consist of paraffin sections, well mounted, stained, and labelled. They could be used from year to year indefinitely. The students would thus be provided with much better material than they now receive and would save one-half hour each day which is spent in mounting the sections. We will make it possible for the student to purchase a collection of slides or else furnish him the opportunity during the summer months of cutting and mounting his own sections.

IV. Financial Statement.

The following statement of accounts indicates the earnings and expenditures of the office of the director:

Laboratory Income.

From September 1, 1913, *to September* 1, 1914.

Balance on hand	$1,479 36
Students' locker fees	407 50
Hospitals	383 34
Contracts	900 00
Examination of specimens other than above noted	2,853 45
Total	$6,023 65

Laboratory Expenses.

From September 1, 1913, *to September* 1, 1914.

Salaries and labor	$2,502 67
Laboratory supplies and equipment	1,651 65
Petty accounts, including office and cleaning supplies, expressage, postage stamps, refund to students for keys, and carfares	230 50
Telephone	89 85
Books	84 27

Stationery	$65 68
Animals	172 85
Food for animals	206 36
Laundry	40 74
Electricity	49 50
Balance on hand September 1, 1914	929 58
Total	$6,023 65

LABORATORY INCOME.

From September 1, 1914 *to September* 1, 1915.

Balance on hand	$929 58
Students' locker fees	265 75
Contracts with hospitals	405 00
Contracts with physicians	800 00
Examination of specimens other than above noted	3,245 76
Total	$5,646 09

LABORATORY EXPENSES.

From September 1, 1914 *to September* 1, 1915.

Salaries and labor	$3,299 59
Laboratory supplies and equipment	1,017 57
Petty accounts, including office and cleaning supplies, expressage, postage stamps, refund to students for keys, and carfares	179 60
Telephone	71 85
Books	77 28
Stationery	67 85
Animals	183 20
Food for animals	97 29
Laundry	38 76
Electricity	14 48
Balance on hand September 1, 1915	598 62
Total	$5,646 09

V. REPAIRS.

The following changes and improvements were made during the year. The steam pipes in the cellar have been covered with asbestos, extra radiators placed in the office and animal room. The seats in the lecture room have been repaired and varnished. The roof and chimney have also been repaired and painted. The projectoscope, which had become worn with constant use, was shipped to the manufacturer, who used such parts as were still good and built a new and more useful instrument. Owing to the necessity of better lighting facilities, the old gas fixtures on the first and second floors were removed and replaced with simple electric fixtures and nitrogen lamps. Not only are these lights more convenient, but the appearance of the different rooms is also greatly improved. The wiring and installation of the fixtures was done by our technician, at a great saving to the laboratory. The work has been inspected and approved.

The increase in the routine necessitated the purchase of a larger refrigerator for the storage of culture media, milk, water and blood. The old icebox, still in an excellent condition, has been converted into an incubator with an electric regulator. A larger and more efficient arnoldizer has also been purchased.

VI. Recommendations.

The greatest need of the laboratory at the present time is new office furniture, to include a more modern filing system. I would suggest that some form of a sectional filing cabinet be installed, so that parts may be added from year to year as needed. These cabinets can be obtained not only for record cards and correspondence, but also for books and microscopical slides. No further space is available in our museum for specimens. It would seem that substantial cabinets with glass doors could be built in the hallway on the first floor. Well prepared and mounted specimens could be placed in these cases and thus additional space be provided for the next two or three years.

A comparison of the above tables with those of previous years will readily show the progressive increase in the number of examinations made by the laboratory staff. This large routine necessitates constant supervision and the demands thus made upon the time of the medical staff have rendered impossible the investigation of new problems. The adoption by the medical college of the concentration system in which teaching occupies but one-half of the school year should enable us to engage in scientific research during the months when classes are not held. In order to make this possible, I would earnestly recommend that there be provided the salary of a first assistant who will assume immediate responsibility for the routine and management of the laboratory. He should have had several years of general laboratory work and be qualified to take complete charge in the absence of the director. Such an arrangement, I am sure, would enhance the usefulness of the laboratory, and work less hardship to the staff as at present constituted.

In conclusion, I wish to express my thanks for your interest and co-operation.

Editorial

The abbess of *Andoüillets,* which, if you look into the large set of provincial maps now publishing at *Paris,* you will find situated amongst the hills which divide *Burgundy* from *Savoy,* being in danger of an *Anchylosis* or stiff joint (the *sinovia* of her knee becoming hard by long matins), and having tried every remedy——first, prayers and thanksgiving; then invocations to all the saints in heaven promiscuously——then particularly to every saint who had ever had a stiff leg, before her——then touching it with all the reliques of the convent, principally with the thigh-bone of the man of *Lystra,* who had been impotent from his youth——then wrapping it up in her veil when she went to bed—then cross-wise her rosary—then bringing in to her aid the secular arm, and anointing it with oils and hot fat of animals——then treating it with emollient and resolving fomentations——then with poultices of marsh-mallows, mallows, bonus Henricus, white lillies and fenugreek—then taking the woods, I mean the smoak of 'em, holding her scapulary across her lap——then decoctions of wild chicory, water-cresses, chervil, sweet cecily and cochlearia——and nothing all this while answering, was prevailed on at last to try the hot baths of *Bourbon*——so having first obtain'd leave of the visitor-general to take care of her existence—she ordered all to be got ready for her journey; a novice of the convent of about seventeen, who had been troubled with a whitloe in her middle finger, by sticking it constantly into the abbess's cast poultices, etc.—had gained such an interest, that overlooking a sciatical old nun, who might have been set up for ever by the hot-baths of *Bourbon, Margarita,* the little novice, was elected as the companion of the journey.

LAWRENCE STERNE.
The Life and Opinions of Tristam Shandy Gentleman.

Commencement, 1916.

Commencement Day, June 9, 1916, passed with the usual activities and celebrations, with somewhat more enthusiasm and a larger attendance than usual. This was gratifying, and speaks well for the interest of the alumni in the reorganization of the college and their approval of the radical changes of the last year in curriculum and corps of instructors. The emphasis of the occasion was upon university affiliation, and this union has now been perfected and will be permanent. Perhaps for the first time in the history of the college its affairs are beyond the reach of personal control. As it has been determined that the classes must be restricted to a number for whom the teaching facilities are available, and as the cost of instruction is higher because of the larger corps of full-time professors and elaborate apparatus, the fees of students are no longer sufficient to meet current expenses.

At the annual meeting of the board of trustees on June 7th, Treasurer Robert Olcott reported the donation of forty thousand dollars, contributed by four gentlemen of Albany, to meet the deficit of running expenses. To this President Rosendale announced he would add one thousand dollars in lieu of his subscription to the proposed building fund. The trustees, realizing that the college serves a large district outside of Albany, and is not merely local, filled vacancies in the board by the election of the following members: Mr. Charles Backman McMurray of Lansingburgh, a trustee of Union College; Mr. Francis Cole Pratt, Assistant to the President of the General Electric Company, Schenectady; Willis Rodney Whitney, Ph.D., Director of the Research Laboratories of the General Electric Company, Schenectady; and Mr. Frederick W. Kelley of Albany. The trustees also decided to hold quarterly meetings of the board, and these, together with committee meetings, will result in at least one meeting a month—a manifest of the purpose of the board to direct the affairs of the college. Not the least gratifying resolution was that introduced by Chancellor Richmond expressing unqualified approval of Dr. Ordway's administration as the executive officer of the board.

The meeting of the Alumni Association was held as usual in the amphitheater, and was well attended. The features of the meeting were the addresses by President Lewi and Dr. Baldwin, Professor of Anatomy. Dr. Lewi's address treated of greater specialization in medicine and emphasized the importance of closer attention to details of certain therapeutic measures which have been neglected by the profession and improperly exploited by ignorant or unscrupulous persons. Professor Baldwin explained in detail the newer conception of the teaching of anatomy. He directed attention to anatomy as the first and fundamental department of medicine to be brought before the student, and showed the necessity on the part of the student of not merely learning the facts, but particularly of acquiring methods and habits of observation and study which are to guide him throughout his entire professional life. He made it plain that the relation of the college to the student is to be determined by the attitude developed in his work in anatomy.

Commencement exercises were held in the auditorium of the State Education building in the afternoon. The exercises were brief, the address being delivered by Dr. George Blumer, Dean of the Medical Department of Yale University. Dr. Blumer's address was particularly timely, and will be published in an early issue of the Annals. As the first Director of the Bender Hygienic Laboratory and sometime Professor of Pathology in the Albany Medical College, he spoke with intimate acquaintance of local conditions, and from the high authority of his present standing in the medical world, his remarks carried encouragement and conviction.

At the banquet in the evening the speakers were: President Lewi, as toastmaster; Chancellor Richmond, Hon. Joseph A. Lawson, Dr. James F. Rooney, Dr. James MacF. Archibold, Dean Blumer and Dean Ordway. Dr. Richmond emphasized the purpose of the Governors of Union University to persist in the elevation of the School to the first rank, and forecasted more rigid requirements for admission and higher scholarship. Dr. Lewi pledged the loyal support of the alumni. Mr. Lawson, in his inimitable manner, described the layman's attitude toward the physician. Dr. Rooney spoke for the Committee of Legislation of the Medical Society of the State of New York, and directed attention to the dangers to the profession of indiscriminate legislation. Dr. Archibold, representing the graduating class, referred wittily to the difficulties facing the young practitioner. Dr. Blumer spoke at length of the relations of medical schools to local practitioners, and of the jealousies and disappointments incident to reorganization, which, he said, are general throughout this country. Dr. Ordway explained the increased expense of medical education, and made a plea for endowment, showing that much could be accomplished by gifts of small amounts for scholarships, students' aid or loan funds.

The election of Dr. Theobald Smith to the Presidency of the Alumni Association justifies anticipation of a successful reunion in 1917. Since his graduation in 1883, Dr. Smith has been engaged in research work of a high order. In the Bureau of Animal Industry in the Federal Department of Agriculture, he discovered the cause of Texas fever, and was the first to call attention to the importance of an intermediary host in the transmission of disease. As Fabyan Professor of Comparative Pathology at Harvard, by the development of methods he proved that human and bovine tuberculosis are not identical. During the last year he has accepted the directorship of the new Division of Animal Pathology in the Rockefeller Institute, at Princeton, N. J. His acceptance of the office is a gratifying indication of the interest of a scientific man in the effort to bring the school in line with scientific advance.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, MAY, 1916.
COMPILED BY WILLIAM FULLGRAFF, REGISTRAR.

Deaths.

Consumption	20
Typhoid fever	0
Scarlet fever	0
Measles	4
Whooping cough	0

Diphtheria and croup	0
Grippe	1
Diarrheal diseases	5
Pneumonia	4
Broncho-pneumonia	2
Bright's disease	16
Apoplexy	9
Cancer	14
Accidents and violence	9
Deaths under one year	21
Deaths over seventy years	39
Total deaths	181
Death rate	19.37
Death rate less non-residents	15.09

Deaths in Institutions.

	Non-Resident.	Resident.
Home for the Aged	3	1
Albany County Hospital	1	3
Hospital for Incurables	1	4
Homeopathic Hospital	4	15
St. Peter's Hospital	6	6
Albany Hospital	13	11
Albany Hospital Camp	2	4
Child's Hospital	3	2
St. Margaret's House	0	2
Lathrop Memorial	1	0
Maternity Hospital	1	3
Public Places	4	0
Births		205
Still births		5

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	6
Scarlet fever	31
Diphtheria and croup	5
Chickenpox	15
Measles	241
Whooping-cough	12
Tuberculosis	40
Mumps	91
Puerperal septicaemia	1
Trachoma	3
Total	445

Number of days quarantine for scarlet fever:
Longest...... 45 Shortest...... 30 Average...... 35 20/24
Number of days quarantine for diphtheria:
Longest...... 20 Shortest...... 9 Average...... 14
Fumigations:
Houses.................. 63 Rooms.................. 216
Milk bottles disinfected.. 26

Communicable Disease in Relation to Schools.

	Reported		
	D.	S. F.	M.
Public School No. 2	..	..	1
Public School No. 3	..	1	11
Public School No. 4	1	..	..
Public School No. 5	..	..	1
Public School No. 6	..	1	5
Public School No. 7	..	1	..
Public School No. 8	..	2	..
Public School No. 10	..	..	1
Public School No. 12	..	..	11
Public School No. 13	..	..	1
Public School No. 14	..	..	3
Public School No. 16	..	..	4
Public School No. 17	1	..	..
Public School No. 18	..	1	..
Public School No. 20	..	1	..
Pcblic School No. 21	..	..	1
Public School No. 22	1	1	18
Public School No. 24	..	..	4
High School	..	..	1
Miss Quinn's School	..	..	2
N. Y. S. Normal School	..	..	1
Albany Female Academy	..	..	1
St. Joseph's School	..	..	18
St. Patrick's Institute	..	..	1
Cathedral School	..	..	2
Lady of Angels School	..	..	2

TUBERCULOSIS.

Living cases on record May 1, 1916		521
Cases reported:		
By card	42	
Dead cases by certificate	1	
		43
		564

Dead cases previously reported	19	
Dead cases not previously reported	1	
Removed	10	
		30

Living cases on record June 1	534
Total tuberculosis death certificates filed during May, 1916	20
Non-resident deaths:	
Albany Hospital Camp	3
Resident deaths	17

Cases of Communicable Disease Visited.

Tuberculosis	50
Measles	44
Scarlet fever	3
Trachoma	3
Total	100
Physicians visited	25

BENDER LABORATORY REPORT.

Diphtheria.

Initial positive	6
Initial negative	168
Release positive	2
Release negative	55
Suspicious	1
Total	232

Test of Sputum for Tuberculosis.

Positive	9
Negative	64
Total	73

Widals.

Positive	8
Negative	25
Suspicious	4
Total	37

Wassermann tests	86
Milk examinations	44
Test for preservatives in milk	30
Examination of animal material	1

Bureau of Nuisances.

Complaints	114
Privy vaults	4
Closets	8
Drains	2
Plumbing	8
Water	12
Stagnant water	4
Sewer	1
Filthy yards	8
Filthy alleys	2
Filthy cellars	3
Filthy lots	3
Filthy premises	20
Manure	3
Stable	2
Chicken	4
Dog	1
Garbage	1
Dump	2
Ashes	1
Smoke	2
Odors	9
Ventilation	3
Unclassified	11
Inspections	141
Sanitary	72
Plumbing	69
Reinspections	199
Sanitary	155
Plumbing	44

Hearings.

Cases heard before health officer	7

Nature of Cases.

Privy vault	1
Filthy premises	3
Chicken	1
Stable	1
Water	1

Disposition of Cases.

Abated	7

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	262
Old houses	78
New houses	184
Iron drains	50
Connection street sewers	29
Tile drains	31
Urinals	0
Cesspools	57
Wash basins	62
Sinks	75
Bath tubs	56
Wash trays	56
Butler's sinks	1
Tank closets	106
Permits issued	159
Plumbing	110
Building	49
Plans submitted	56
Old buildings	19
New buildings	37
Houses tested	43
Blue or red	1
Peppermint	5
Water test	37
Houses examined	54
Re-examined	91
Valid	26
Without cause	28

DEAD ANIMAL REPORT.

Animals removed from 1st precinct	54
Animals removed from 2nd precinct	28
Animals removed from 3rd precinct	16
Animals removed from 4th precinct	17
Animals removed from 5th precinct	8
Kennel cats removed	110
Kennel dogs removed	69
Total	302

Horses removed	31
Dogs removed	98
Cats removed	173
Total.	302

BUREAU OF MARKETS AND MILK.

Public market inspections	44
Market inspections	147
Fish market inspections	23
Packing house inspections	2
Slaughter house inspections	5
Rendering plant inspections	2
Hide house inspections	1
Milk depots inspected	9
Stores inspected	108
Milk cans inspected	196
Lactometer readings	150
Temperature readings	150
Fat tests	78
Sediment tests	84
Chemical tests	46
Bacterial counts	54
Complaints investigated	3
Storekeepers' permits issued	28
Dogs examined for rabies	1
Dogs re-examined	4

MISCELLANEOUS.

Cards posted for contagious disease	179
Cards removed	299
Notices served on schools	445
Notices served on stores	18
Notices served on factories	12
Postal card returns sent to doctors	179
Postal card returns received from doctors	250
Inspections and reinspections	187
Work certificates issued to children	27
Vaccinations	86
Cases assigned to health physicians	80
Calls made	170
Garbage collected from 1st district (barrels)	407
Garbage collected from 2nd district (barrels)	369

Medical News

Edited by Arthur J. Bedell, M. D.

Albany Guild for the Care of the Sick.—Department of Visiting Nursing.—Statistics for May, 1916.—Number of new cases, 165; classified as follows: Dispensary patients receiving home care, 14; district cases reported by health physicians, 1; charity cases reported by other physicians, 21; moderate income patients, 99; metropolitan patients, 30; old cases still under treatment, 524; total number of cases under nursing care during month, 689. Classification of diseases for the new cases: Medical, 28; surgical, 12; gynecological, 0; obstetrical under professional care, mothers 49, infants 46; eye and ear, 2; skin, 0; throat and nose, 0; dental, 0; infectious diseases in the medical list, 28; surgical list, 0. Disposition: Removed to hospitals, 13; deaths, 19; discharged cured, 103; improved, 39; unimproved, 14; number of patients still remaining under care, 501.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 0; nurses in attendance, 2; patients carried over from last month, 1; new patients during month, 2; patients discharged, 2; visits by head obstetrician, 0; by attending obstetrician, 14; by students, 0; by nurses, 14; total number of visits for this department, 28.

Visit of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,481; for professional supervision of convalescents, 720; total number of visits. 2,201; visits to pay cases, 928; to charity cases, 553; to unrecorded cases, 720; cases reported to the Guild by 1 health physician, and 48 other physicians; graduate nurses 7, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 98; new patients, 120; old patients, 419; total number of patients treated during month, 539. Classification of clinics held: Surgical, 14; nose and throat, 9; eye and ear, 15; skin and genito-urinary, 7; medical, 14; lung, 9; dental, 0; nervous, 5; stomach, 3; children, 13; gynecological, 9.

Medical Society of the County of Albany.—The annual meeting of the Medical Society of the County of Albany was held in the Supreme Court Chamber, City Hall, Friday, May 26th, at 8.30 p. m. The following officers were elected: President, Dr. H. J. Lipes; vice-president, Dr. E. E. Hinman; secretary, Dr. E. S. Haswell, re-elected; treasurer, Dr. G. W. Papen, Jr., re-elected.

Medical Society of the County of Schenectady.—The regular semi-annual meeting of the Medical Society of the County of Schenectady was held at Newman's Lake House, Saratoga Lake, Tuesday, June 20, 1916, at 2 p. m. Dr. Frank Vander Bogart read a paper on "Some Manifestations of Colon Bacillus Infections of the Urinary Tract in Infancy."

SARATOGA SPRINGS MEDICAL SOCIETY.—Annual meeting of the Saratoga Springs Medical Society was held at Newman's Lake House, Thursday, May 25, 1916, at 8.30 P. M. Dr. Charles B. Towns, of New York, read a paper on "The Drug and Alcoholic Problem from a Medical and Sociological Standpoint."

ALBANY MEDICAL COLLEGE.—The eighty-fifth Commencement exercises of the Albany Medical College was held in the auditorium of the New York State Education Building, on Friday, June 9, 1916, at 3 P. M.

AMERICAN MEDICAL ASSOCIATION.—At the sixty-seventh annual meeting of the American Medical Association held in Detroit, Mich., June 13th, 14th, 15th and 16th, 1916, the following officers were elected: Dr. C. H. Mayo. Rochester. Minn.. president; Dr. L. F. Barker, Baltimore, Md., first vice-president; Dr. J. F. Leaming, Chicago, second vice-president; Dr. J. H. Carstens, Detroit, Mich., third vice-president; Dr. G. F. Keiper. Lafayette. Ind., Dr. L. R. Craig, Chicago, Ill., secretary; Dr. W. A. Pusey, Chicago, Ill., treasurer.

ANNUAL CONFERENCE OF SANITARY OFFICERS.—The annual Conference of Sanitary Officers was held in Saratoga Springs, June 6th to 8th. The meeting was devoted wholly to matters affecting the routine work of the health officer.

ARMY MEDICAL CORPS EXAMINATIONS.—The surgeon general of the army announces that preliminary examinations for the appointment of first lieutenants in the Army Medical Corps will be held on July 17, 1916, and August 14, 1916, at points to be hereafter designated.

Full information concerning these examinations can be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to securing an invitation are that the applicant shall be a citizen of the United States, shall be between twenty-two and thirty years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, shall be of good moral character and habits, and shall have had at least one year's hospital training as an interne, after graduation. The examinations will be held simultaneously throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received in order to lessen the traveling expenses of applicants as much as possible.

In order to perfect all necessary arrangements for the examination, applications must be completed and in possession of the Adjutant General, at least three weeks before the date of examination. Early attention is therefore enjoined upon all intending applicants. There will be more than one hundred vacancies to be filled after July 1st, when the bill for the reorganization of the army becomes a law.

United States Public Health Service.—Model Homes Planned for Washington.—Plans have just been completed for the erection of a series of model homes in the city of Washington for the purpose of demonstrating to the nation the relationship between good housing and good health. These are to be known as the Ellen Wilson homes, and are not in the nature of an experiment, but are intended as a demonstration to the entire United States.

The intimate connection between bad housing and bad health and good housing and good health is clearly recognized in Washington, where the alley dwellings have long been a matter of concern both to the health authorities and to public spirited citizens who wish the capital city to be an example to the nation. The alleys have been paved, sewers and water mains have been laid in them, they are lighted and cleaned as are the streets. Yet they keep their old lead over the streets, when it comes to totaling the figures for disease and death.

In this, Washington's experience has been like that of Liverpool and other European cities which tried unsuccessfully to make badly situated dwellings wholesome by cleaning and fumigating. After thirty-three years of unavailing effort to improve that which was fundamentally bad, Liverpool finally decided that the only hope lay in wiping out its insanitary areas. It demolished the old houses by the acre and in place of them built new houses. Where dwellings have been crowded so close together that there was scarcely passage room for a stout man to squeeze his way to one of the old rear houses, it built new dwellings opening upon wide spaces which provided light and air. Immediately sickness and death decreased—and with them vice and crime. What had seemed a hopeless struggle for more than a generation was won.

Other cities in Europe have done the same and with the same results, but what makes Liverpool's figures of unusual value is that the new houses are occupied by the same people who occupied the old ones. In some cases the population on a given area in the new dwellings is ninety-nine per cent the same as that which lived on the area in the old buildings. So here the effect of housing is not complicated by questions of different occupants, of better food or clothing or a generally higher standard of living. The housing only has been changed and the results are striking.

Washington is attempting much the same work, though in a less dramatic manner. Congress has enacted a law which goes into effect on July 1, 1918, according to which all the alley dwellings in the District of Columbia must cease to be used for dwelling purposes. Meanwhile, in order that there may be accommodation for those who will be forced to seek new homes in street houses, there has been organized a limited dividend company which is to build houses that will be not only sanitary, that will provide not only abundance of light and air, but houses attractive architecturally, homelike in their arrangements and containing bath rooms and provisions for hot water in place of the old outdoor closets and hydrants.

Such houses as these cannot, of course, yield the return upon the investment that the old houses did. In fact Congress in its act incorporating the Ellen Wilson Homes, limited its dividends to five per cent net. But they will yield to their stockholders a dividend in the form of satisfaction because of a needed work well done. To their tenants they will give relief from preventable sickness and death and an increase in the joy of living.

Clean Food Shops.—Cleanliness in Grocery Stores Essential to Wholesome Food Supply.—The food officials of many States are giving attention to the sanitary condition of country and city grocery stores, according to the officials engaged in the enforcement of the Federal Food and Drugs Act, who recently have investigated the matter. The country store is both a collecting and distributing agency of foods. It sells foods of many kinds to the farmers and at the same time buys from them for shipment to the city, butter, eggs, fruits, vegetables, poultry, and other products of the farm. If the shelves and counters are laden with dust, if cobwebs hang in every nook and corner, if flies, bugs and vermin inhabit the place, the food products are certain to be more or less contaminated and likely to become dangerous to health. The reports from various State officials indicate that many stores have been found in the past to be in such a condition.

A clean, light, well ventilated store attracts customers, and the progressive merchant needs no other incentive to keep his floor, shelves, and counter spotlessly clean, which includes screening from flies and the elimination of all other insects. Some storekeepers, however, seem to require prodding from food and health officials to induce them to maintain that degree of cleanliness which will insure that the food they handle will be free from contamination. Some of the States have very effective sanitary laws which require frequent inspection of all establishments where foodstuffs are put up, manufactured, or kept for sale. Other States depend upon the general provisions of pure food laws which require that foods shall be free from contamination. A few of the States lack either a law that will reach the unclean store nuisance, or means for enforcing the law.

Coöperate for Cleanliness.—State food and health officials have used various means to control effectively the sanitary condition of places where foodstuffs are sold. One of the most effective means that has been employed is that of securing the coöperation of women's clubs and civic organizations. When a delegation of women customers call upon a merchant and suggests that he clean up, he is compelled to put his store in good condition and to keep it so. When the grocerymen in a town find that a large portion of the housekeepers are buying only from the cleanest stores, there arises a wholesome form of competition. A food inspector can, under even the best conditions, inspect a store but a few times during the year, because of the number he has to visit. The customers come every day, however, and when they act as unofficial sanitary inspectors, the merchant with the unclean store cannot escape detection and punishment in loss of trade.

Competition in cleanliness has been secured in one State by means of colored placards which the inspector gives the merchants who keep their stores in a sanitary condition. A store in excellent condition gets a large white placard, one in fine condition gets a blue placard, and one in good condition gets a red card; the store that falls below the latter grading gets no card. The proprietors are permitted to keep the placards posted in a conspicuous place as long as the store is kept in the condition represented. There is keen competition among the merchants to get and keep the best placards. The buying public knows what the different colored placards signify and are particularly partial to the white placard stores. Other States have adopted a score card system similar to that used in grading dairies. The inspector scores each store where foodstuffs are sold according to certain points indicated on an inspection card. The scores are made public through the local press or by means of bulletins or circulars.

State Laws Control Store Sanitation.—The sanitary condition of stores is subject to State or local control. The Federal Food and Drugs Act has no jurisdiction over such matters, except as to foods and drugs sold in the District of Columbia, territories, and insular possessions, which are under the direct control of the Federal government. However, if food becomes contaminated in an unsanitary store or in any other manner and is afterward shipped into interstate commerce, the party responsible for the shipment may be prosecuted under the Federal law, and the contaminated food may be seized.

Bill on Criminology in Congress.—By Arthur MacDonald, Washington, D. C. The bill on criminology (S. 4990 and H. R. 8820) has been introduced in the present Congress by Hon. Joseph T. Robinson of the Senate, and Hon. Joseph Taggart of the House. It is one of the oldest bills in Congress. It has been reported favorably by the judiciary committees of both houses twice. It has failed to become law mainly through unintentional delay.

The bill has been endorsed by the principal representatives of the legal and medical professions of this country, including the American Bar Association and six national and twenty-five State medical societies; it has also been recommended by many religious associations of different denominations, including twenty-five Presbyteries. It also has the endorsement of the Congress of Criminal Anthropology in Europe. No bill ever in Congress has had such endorsement. The plan of work in bill was presented to Russia and Belgium, and adopted by both countries. Many other foreign nations are doing scientific work in criminology.

Purpose of Bill on Criminology.—The general purpose of the bill is to lessen and prevent crime, pauperism and defectiveness by the best methods known to science and sociology. In addition to this general scope of the bill, there are some direct ends in view:

1. To gain more trustworthy knowledge of social evils. Such knowledge would furnish a basis for modifying defective laws, adapting them to present conditions.

2. To furnish a basis for methods of reform, and in addition seek, through knowledge gained by scientific study, to protect the weak (especially the young), in advance before they have gone wrong, and not after they have fallen and become tainted, which is the great defect of most schemes of reform.

3. To find whether or not there are any physical and mental characteristics that distinguish habitual from occasional criminals. Such knowledge would enable the community to protect itself in advance from habitual criminals and assist prison officials in preventing them from contaminating other criminals.

4. Exhaustive study of single typical criminals, which represent a large number, will give definite knowledge as to just how men become criminals, and to what extent their surroundings influence them as compared with their inward natures. This would make possible a rational application of remedies for these evils.

5. More exact knowledge of the abnormal classes will enable us to manage them better in institutions. Such studies will bring men of better education and training in control of the institutions, and increase interest in the professional study of these classes, which the American Bar Association emphasized. when endorsing the work.

6. To summarize and combine results already gathered by city. State and federal institutions and governments, encouraging uniformity of method in collecting data and making such data useful generally.

7. To lessen the enormous expense to governments of the abnormal classes by study of the causes of the evils that involve such expense.

One reason why so many professional organizations dealing first hand with some phase of this work support this measure is that they think it is time that governments begin a scientific study of those social evils which are their greatest enemies. Many worthy efforts are being made to lessen social evils, but they are mostly palliative, and do not go to the root of the matter.

United States Civil Service Examination.—Assistant Epidemiologist (Male), $2,000-$2,500.—The United States Civil Service Commission announces an open competitive examination for assistant epidemiologist for men only. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in the public health service, at salaries ranging from $2,000 to $2,500 per annum, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to make epidemiologic and sanitary surveys to determine the prevalence and causation of disease, to conduct laboratory studies in relation thereto, and to recommend measures to prevent and control outbreaks of disease.

It is desired to secure persons thoroughly competent in the various branches of sanitary bacteriology, and especially in isolating the typhoid bacillus from infected persons and materials.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects.	Weights.
1. General education and medical training	25
2. Laboratory experience	25
3. Experience in epidemiological work	40
4. Publications or thesis	10
Total	100

Graduation from a medical school or college of recognized standing, or graduation in sanitary engineering from a college or university of recognized standing; and at least three years' experience in epidemiological work under Federal, State, or local authorities, and experience in laboratory technique, especially in regard to typhoid fever, are prerequisites for consideration for this position.

If a thesis is submitted under subject 4 it must be on some sanitary subject upon which the candidate has done special work.

Statements as to education and experience are accepted subject to verification.

Applicants must have reached their twenty-third but not their fortieth birthday on the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 304, and special form, stating the title of the examination desired, to the United States Civil Service Commission, Washington, D. C.; the secretary of the United States Civil Service Board, Post Office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; Customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawaii; Old Customhouse, St. Louis, Mo.; Administration Bldg., Balboa Heights, Canal Zone; or to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Applications should be properly executed, excluding the medical and county officer's certificates, and must be filed with the commission at Washington, with the material required, prior to the hour of closing business on June 6, 1916.

United States Civil Service Examination.—Medical Interne, Government Hospital for the Insane.—The United States Civil Service Commission announces an open competitive examination for medical interne, for both men and women, on June 7, 1916, at the places mentioned in the list printed hereon. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in the Government Hospital for the Insane, Washington, D. C., at $900 per annum, with maintenance, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The positions are tenable for one year, and pay $75 a month and maintenance. During the year, however, a postgraduate course in mental and neurological diagnostic methods is given, an examination is held, and promotions to the next grade, junior assistant physician, are made. Beyond this there is regular advancement for men whose services are satisfactory. The Government Hospital for the Insane has over 3,000 patients and about 800 employees to care for. In addition to the general medical practice offered, the scientific opportunities in neurology and psychiatry are unsurpassed.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

Subjects.	Weights.
1. Anatomy and physiology (general questions on anatomy and physiology, and histologic or minute anatomy)	10
2. Chemistry, materia medica, and therapeutics (elementary questions in inorganic and organic chemistry, the physiologic action and therapeutic uses and doses of drugs)	15
3. Surgery and surgical pathology (general surgery, surgical diagnosis, the pathology of surgical diseases)	20
4. General pathology and practice (the symptomatology, etiology, diagnosis, pathology, and treatment of diseases)	25
5. Bacteriology and hygiene (bacteriologic methods, especially those relating to diagnosis, the application of hygienic methods to prophylaxis and treatment)	15
6. Obstetrics and gynecology (the general practice of obstetrics, diseases of women, their pathology, diagnosis, symptoms, and treatment, medical and surgical)	15
Total	100

Applicants must show that they are graduates of a reputable medical college or that they are senior students in such an institution and expect to graduate within six months from the date of this examination. The names of senior students will not be certified for appointment in the event they attain eligibility in the examination until they have furnished proof of actual graduation.

Applicants must not have graduated previous to the year 1914 unless they have been continuously engaged in hospital, laboratory, or research work along the lines of neurology or psychiatry since graduation, which fact must be specifically shown in the application.

Applicants must be unmarried.

Age, 20 years or over on the date of the examination.

No sample questions of this examination will be furnished.

Applicants must submit to the examiner on the day of the examination their photographs, taken within two years, securely pasted in the space provided on the admission cards sent them after their applications are filed. Tintypes or proofs will not be accepted.

This examination is open to all citizens of the United States who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 1312, stating the title of the examination for which the form is desired, to the United States Civil Service Commission, Washington, D. C., or to the secretary of the United States Civil Service Board at any place mentioned in the list printed hereon. Applications should be properly executed, excluding the medical and county officer's certificates, and filed with the commission at Washington in time to arrange for the examination at the place selected by the applicant. The exact title of the examination as given at the head of this announcement should be stated in the application form.

PERSONALS.—Dr. LEO F. ADT (A. M. C. '92), Albany, has removed to 206 State Street, Albany.

—Dr. JOHN F. SOUTHWELL (A. M. C. '10), is practising at 346 State Street.

—Dr. JOHN L. EDWARDS (A. M. C. '12), is engaged in active practice at Hudson, N. Y.

—Dr. JONATHAN PEARSON (A. M. C. '15), has opened an office at 713 Union Street, Schenectady, N. Y.

MARRIED.—Dr. JOHN L. EDWARDS (A. M. C. '12), Albany, and Miss Marie E. K. Diefendorf, were married at Albany, May 25, 1916.

DIED.—Dr. WILLIAM R. NICHOLS (A. M. C. '98), Rensselaer, died at his home May 19, 1916.

VOL. XXXVII AUGUST, 1916 No. 9

ALBANY
MEDICAL ANNALS

Original Communications

SHOULD NOTIFICATION, QUARANTINE AND TERMINAL FUMIGATION BE REQUIRED IN CHICKENPOX, MUMPS AND GERMAN MEASLES?

Read before the Fulton County Medical Society, April 13, 1916.

By LINSLY R. WILLIAMS, M. D.,
Deputy Commissioner of Health, Albany, N. Y.

Before the adoption of the regulations of the Sanitary Code of New York State on communicable diseases there was considerable discussion on the subject of quarantine of the minor communicable diseases. A general informal discussion of the entire subject was held before the Public Health Council in March, 1914, at which a number of health officers of the State expressed their views. Some stated that chickenpox was too mild a disease to be reported and too insignificant. Some said that German measles had no sanitary importance, and similar statements were made in regard to mumps. A few pointed out that German measles was often confused with scarlet fever, and that chickenpox in adults might be confused with smallpox.

In the regulations adopted by the council in March, 1914, all three of these diseases remained notifiable. During the winter of 1915, there being some criticism of these regulations, the matter was discussed again by the council, and the department was asked to make an investigation and to report to the council at some future time. This investigation included a study of the mortality from these diseases, which has been reported elsewhere, and an inquiry from a number of physicians* as to whether or not these diseases should remain notifiable, whether quarantine was necessary, and whether terminal disinfection or fumigation should be required. A questionnaire was sent to eighteen physicians who are prominent, either as health officers or practitioners of medicine and who have had unusual experience in these diseases.

QUESTIONNAIRE.

"In your experience is chickenpox, mumps or German measles ever fatal?

Have you seen or do you know of any dangerous sequelae in chickenpox, mumps or German measles?

What errors in diagnosis are likely to occur in these diseases?

How often is chickenpox confused with smallpox?

Should chickenpox remain notifiable for this reason?

If so, at what age limit?

How often is German measles mistaken for measles or scarlet fever?

Should German measles be notifiable for this reason?

Has mumps any bearing on sterility?

Should chickenpox, mumps or German measles be notifiable as a preventive measure?

Would you recommend abolishing notification in chickenpox, mumps or German measles?

At what age limits in chickenpox?

Would you recommend abolishing quarantine in chickenpox, mumps or German measles?

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* The following is a list of the physicians from whom replies were received: Dr. George W. Goler, Rochester, N. Y.; Dr. John L. Morse, Boston, Mass.; Dr. J. H. Lowman, Cleveland, Ohio; Dr. E. C. Levy, Richmond, Va.; Dr. H. L. K. Shaw, Albany, N. Y.; Dr. R. C. Freeman, New York City; Dr. Charles J. Hastings, Toronto, Canada; Dr. Norris G. Orchard, Rochester, N. Y.; Dr. Haven Emerson, New York City; Dr. Peter H. Bryce, Ottawa, Canada; Dr. John R. Williams, Rochester, N. Y.; Dr. J. W. Trask, Washington, D. C.; Dr. Charles V. Chapin, Providence, R. I.; Dr. J. S. Billings, New York City; Dr. J. N. Hurty, Secretary State Board of Health, Indianapolis, Indiana; Dr. Arthur Sautter, Health Officer, Albany, N. Y.; Dr. L. Emmett Holt, New York City; Dr. F. W. Sears, Sanitary Supervisor, Syracuse, N. Y.; Dr. Charles G. Kerley, New York City.

Would you recommend abolishing terminal disinfection in chickenpox, mumps or German measles?

If you do not believe that chickenpox, mumps, or German measles should remain notifiable as a preventive measure, do you think they should remain notifiable as a morbidity report for statistical purposes?"

Sixteen replies were received and they showed a very marked agreement.

Chickenpox:

Seven physicians state that chickenpox is occasionally fatal, and six state that they have seen dangerous complications, such as erysipelas, gangrenous dermatitis and nephritis. Every one of the physicians replying state that chickenpox may be confused with smallpox, especially in adults. One believes that it should not be a reportable disease, one believes that it should not be reportable except for persons over twelve years of age, and one believes that it should not be reportable except for persons over fifteen years of age; three would abolish quarantine after a definite diagnosis had been made; fourteen would abolish terminal disinfection; two would continue it; several of the fourteen qualified this by saying that if terminal disinfection meant fumigation they would abolish it, but would not give up cleansing and airing. These reports agree with what has been the policy of the department, and the following procedures are carried out:

All cases of chickenpox are required to be reported. Whenever a case is reported in an adult over fifteen years of age a diagnostician is sent to confirm the diagnosis. In a number of instances the diagnosis has been found to be smallpox and quarantine has been established in all instances, but adults in the family who do not come in contact with the affected person are allowed to continue their ordinary vocations, provided they do not come in contact with the children.

Fumigation is not required, but the health officer may require renovation of the apartments, cleansing and airing or fumigation as he may deem necessary. Washing and cleansing of the person is also required and quarantine is maintained for a period of at least twelve days or until the crusts have fallen and the scars are completely healed.

Mumps:

Two physicians report that they have known of fatal cases; four report that they have seen dangerous sequelae; and ten of the physicians report that the diagnosis is confused at times with adenitis, diphtheria, diphtheritic adenitis, diphtheritic parotitis and suppurative parotitis; three would abolish notification; three would abolish quarantine; all but two would abolish terminal disinfection. It has seemed wise to the Public Health Council and to this department to require the reporting of cases of mumps. Quarantine is maintained for a period not less than two weeks or one week after the disappearance of the swelling. The health officer may require either thorough cleansing, renovation or disinfection.

German measles:

Four of the physicians report that they know of deaths that have occurred from German measles; one reports meningitis as a complication; fourteen of the sixteen state that scarlet fever is not infrequently diagnosed as German measles, and fourteen state that for this reason German measles should be notifiable; three would abolish quarantine, and fourteen would abolish terminal disinfection.

The experience of this department shows that in several instances there have been epidemics of scarlet fever arising from cases originally diagnosed as German measles, and for this important reason German measles is required to be reported. Quarantine is not required, nor is terminal disinfection.

Conclusions:

It would seem to be of great importance to require the reporting of all three of these diseases if any attempt is to be made to control them and abolish them.

Chickenpox is not infrequently confused with smallpox and is a very contagious disease, and as it occasionally has severe complications it should be controlled, not only from the danger of its being confused with smallpox but also because it may be a serious disease itself.

German measles requires no further control, except that it should be reportable and diagnosis should be confirmed by experts in order to prevent confusion with scarlet fever.

Mumps may be a more serious disease than is supposed and should for this reason be reported. Physicians and health officials too often forget that communicable diseases which are mild in a healthy, well-cared for child, may be a serious factor in the life of a child weakened from malnutrition or improper care.

SYSTEMIC INFECTIONS THROUGH THE ORAL CAVITY.

Read before the Medical Society of the County of Schenectady, February 5, 1916.

By J. H. COLLINS, M. D.

We, as physicians, have been slow to attach the proper degree of importance to the above named port of entrance when treating the various forms of systemic infection.

If only the place of origin of a disease in the body can be discovered and eradicated or properly dealt with, the first and most natural and often the most important step in treating disease has been accomplished.

Within the past five years the relative importance of the mouth, nose and throat in the origin of disease has been given a great deal more prominence than in the previous decade.

While it is a fact that nearly all of the infections that enter the system do so by way of the respiratory or alimentary tracts, it is also an accepted fact that a large majority of such organisms have their port of entrance through the oral cavity or the contiguous mucous membrane or adenoid tissue. The great importance of the well known diseases of the nasal passages and their sinuses the lymphatic tissue of the pharynx including the tonsils and the diseases of the gums and teeth has been emphasized.

The pharynx may be described as a conical musculo membranous bag suspended base up with its upper attachment to the basilar process of the occipital bone and extending to the lower border of the larynx. It is richly supplied with lymphoid tissue, of which the faucial tonsils are of the greatest importance. There is a smaller amount of lymphoid tissue in the naso-pharynx and when hypertrophied is spoken of as adenoid; also a still smaller amount at the base of the tongue, known as the lingual tonsil and these four are sometimes spoken of as Waldeyer's tonsilar ring. To understand the accessibility of bacteria to the blood and lymphatic streams, the anatomy of the tonsil should be considered for a moment.

The faucial tonsil is a lymphatic structure lying between the anterior and posterior pillars of the fauces, consisting of the palato-pharyngens and the palato-glossus muscles respectively, and with the plica tonsilaris above and the plica triangularis below. The inner or median surface is covered by squamous epithelium, while the outer and lateral surfaces are covered by fibrous capsule of connective tissue. Miscroscopically we find finger like trabiculae extending into lymphoid substance, which serve as supporting structures, and carry the blood vessels and lymphatics. From the median surface extend the crypts formed by the invagination of the epithelium and reaching almost to the capsule.

The lymphoid cells of the tonsil are massed together in a loose connective tissue reticulum and through this are seen the follicles, consisting of germinating lymph cells and their newly formed lymphocytes. These lymphocytes pass out of the follicles, some of them work through the epithelium into the crypts, while most of them move through the lymph spaces along the trabeculae, and finally enter the efferent lymphatic vessels. In the crypts are found cast-off epithelium lymphocytes in various stages of disintegration, leucocytes, various bacteria, detritus, etc. When the tonsils are compressed by swallowing, some of the contents is forced out of the crypts and some forced still deeper into them. The crypts have only one or two layers of cells for a lining, hence bacteria can easily gain entrance into the lymphoid tissue.

The contents of the crypts plus heat and moisture form an ideal incubator for the growth of the various bacteria which enter the system. As has already been seen, from this place entrance into the lymphatic vessels as well as the blood stream is comparatively easy.

The lymphatics of the tonsils are numerous and arranged as follows: The efferent vessels empty into two main groups

(a) The lymphatic glands near the angle of the lower jaw; then into the superficial cervical chain, which drains directly into the inferior deep cervicals;

(b) "The superior deep cervicals." These glands are twenty or thirty in number, and are located along the internal jugular and subclavian veins. They are divided into an inferior and superior group; both groups are situated along the internal jugular vein between the base of the skull and the subclavian veins and ultimately receive the efferent vessels from all the lymphatic structures of the head and neck, the efferent vessels from the inferior group finally unite to form the jugular lymphatic trunk which empties on the right side into the right subclavian vein through the right lymphatic duct and on the left side into the thoracic duct. Thus the throat forms a region richly studded with crypts, follicles and lymphoid tissue; conditions most favorable for inflammatory processes. I will not discuss the ordinary local inflammations, degenerations or tumors of this region except as they are concerned in the general or systemic disease, but rather some of the bacteriologic and experimental evidence which has accumulated to establish more firmly the assertion that the lymphoid tissue of Waldyer's ring is the most frequent portal of systemic infection. Wood has demonstrated that the anthrax bacillus gains entrance to the system by way of the tonsil in the lower animals. In some sections of the tonsil tissue the bacilli were found penetrating the blood vessel walls, while a few were found in the blood stream.

MacLachlan has reported the microscopic examination of 350 pairs of tonsils and makes the following statement. We have observed that when symptoms of acute tonsilitus are present there is always a pathologic basis as shown by ulceration of the lining of the crypts. We therefore feel that a similar lesion is present in the tonsilitis preceding rheumatism, and as far as we know, this lesion differs in no way from that of acute lacunar tonsilitis. We regard the ulceration of the lining of the crypts as being the vulnerable point of entry of organisms from the mouth.

It matters little apparently what bacteria have produced the lesion for once the ulcer has formed, it is possible for any type of organism to gain access to the deeper tissues.

Dick and Burmeister made observations regarding the toxicity of human tonsils. The tonsils were received in sterile gauze, ground in a mortar and extracts prepared plated and examined microscopically. These extracts were then injected into rabbits, guinea pigs and dogs. Many interesting observations were made both ante and post mortem. Their conclusions are as follows: The extracts of tonsils are acutely toxic for animals. These substances affect animals in a manner similar to that of anaphylactoxin.

The relation of the toxicity of tonsil extracts to the bacterial flora demands further study. The results of this work however would indicate that as a rule, extracts of those tonsils are most toxic which are associated with hemolytic streptococci.

Davis reports a study of the tonsils in their relation to chronic articular renal and cardiac lesions in 113 cases, and his data may be summarized briefly as follows:

Arthritis. Hemolytic streptococci were found in all of the twenty-eight cases examined and were predominant in twenty-five cases. Arthritis was promptly produced by injection of the bacteria into the veins of rabbits.

Nephritis. Ten cases studied nine showed hemolytic streptococci. On injection into the veins of rabbits, all ten developed lesions of the tendon sheaths or joints. The kidneys and urine remained negative.

Endocarditis. Ten cases studied. Cultures from four of the six showing hemolytic streptococci were injected into rabbits, and arthritis promptly developed. Of the remaining cases two gave pure pneumococci and two pneumococci mixed with other bacteria. Rabbits were injected with three of the pneumococci strains; two developed marked vegetative endocarditis. Of the remaining cases, nearly all with histories of repeated attacks of tonsilitis, sixty-one were classified as tonsilar hypertrophy. In fifty the bacteriology showed hemolytic streptococci in almost pure culture; pneumococci predominated in two, influenza bacilli in three. Seven strains of the streptococci were injected into rabbits. All developed arthritis. One case of multiple neuritis without arthritis or heart lesions and in which the crypts revealed pure hemolytic streptococci produced a rapidly fatal multiple arthritis in a rabbit. The microscopic examination of the tonsil in this group generally showed polyneuclear leukocytic clusters far down at the end of the branching crypts. With histories of repeated attacks of tonsilitis the crypts were found more and more distorted and the basis more fibrous, adhesions closing some of the crypts were observed with resulting abscess cavities beyond. Rosenau's achievement in isolating the streptococcus rheumaticus and his brilliant work in the transmutation of bacteria entitles him to the foremost place in showing the direct connection between focal and systemic disease. He discovered a certain micro-organism as the causative agent of a definite pathologic lesion.

This was proved by cultural isolation and animal inoculations. Then by means of variations in culture media, oxygen tension, salt concentration, growing in symbiosis, injections into cavities of animals, etc., he succeeded in changing the morphologic and various properties of many bacteria. Thus strains of hemolytic streptococci have been converted into streptococci viridans, typical pneumococci and streptococci mucosa. Similarly, strains isolated as pneumococci from the sputum, blood and lungs in pneumonia and from empyema, have been made to correspond to hemolytic streptococci, others changed into streptococci-viridans, streptococci of rheumatism, etc., and some back again into pneumococci. This evidence strongly suggests that similar changes may occur in the bacteria located in various foci of infection in the human body. Focal infections are no longer to be looked upon as places of entrance of bacteria, but as places where conditions are favorable for them to develop and acquire properties which give them a wide range of affinity for various structures. I, personally, heard Dr. Rosenau state while addressing an evening meeting of the visiting doctors at the Mayo clinic that the possibilities along this line of work at which he was busy at present were so great that he was obliged to continually check himself lest his enthusiasm in this work would justify others in considering him a fanatic.

He said, however, that research work along this line was bound to revolutionize the practice of medicine. In reviewing these data, an interesting chain of evidence may be formed. There are the microscopic and the bacteriologic examinations of diseased tonsils. The demonstration of bacteria invading the tonsil and entering the blood stream; the finding of toxic substances in the tonsil and the isolation of organisms from the tonsils of patients having cardiac and anthritic diseases, which subsequently have been shown by animal inoculations to be the etiologic factor of the disease. Nothing seems lacking to prove the conclusion that bacteria may gain entrance to the tonsilar tissue, localize there and then by dissemination of their toxins, or the organisms themselves, produce pathologic lesions in remote parts of the body.

That the tonsils are often factors in many systemic disorders where a direct bacterial connection may not be demonstrated is highly probable. They may become such by acting as contributary agents in creating a favorable condition for the development of systemic disease. Their connection as a factor in this respect is shown by the marked therapeutic results which so constantly follow their removal in given conditions. That this relationship has been noticed for a long time is established by records that "Celsus" removed tonsils in the year 10 A. D.

This evidence as to the cause of systemic disease can be most easily considered by noting the conditions in which the removal of tonsils has been followed by marked benefit to the patient. We will not consider pathological conditions of the tonsil itself or the tissues in the immediate vicinity except to speak of cervical adenitis. Wood, after some original work on tuberculosis absorption through tonsilar tissue reviewed the literature and summarized the findings of autopsies on individuals dying of tuberculosis. In 145 autopsies, 103, or seventy-one per cent showed secondary tuberculous changes in the tonsil. In 1,671 autopsies there was primary tuberculosis of the faucial tonsil in eighty-eight, or more than five per cent and of these the pharyngeal tonsil was infected in ten per cent. Various pathologists studied tonsils removed from patients having adenitis and all agree that diseased lymphoid tissue is the channel of tuberculous infection of the cervical lymph glands.

Endocarditis, myocarditis, pericarditis, arthritis, nephritis, chorea, osteomylitis, pleurisy, phlebitis, meningitis, and various eruptions of the skin may be mentioned.

The relationship between tonsilitis and rheumatism commented on long ago, is now firmly established. Recently many writers have reported cases of relapsing iritis phlyctenular and interstitial keratitis, etc., which have long resisted the usual line of treatment but quickly vanished after the removal of diseased tonsils. Some of the conditions may seem rather improbable, but, for illustration, let us consider chorea. Archibald has made the following observations:

(1) The frequency of a previous history of tonsilar disease in rheumatism and chorea;

(2) The frequent occurrence of the two diseases together or at different times in the same individual;

(3) The liability of the two diseases to be complicated by cardiac affections.

He refers to Rosenau's work in rheumatic affections which proved conclusively that definite strains of the same bacteria have a predilection for special tissues and organs. Following this idea, he says it would seem probable that chorea also is produced by a strain of streptococcus with a special tendency to attack the central nervous system. Supporting this theory he refers to the work of Dick and Rothstein. These investigators isolated a streptococcus from the throat of a patient with chorea of five years' duration. Similar organisms were isolated from a number of patients with more acute chorea. A dog injected intravenously with a growth of this streptococcus developed choreic movements within twelve hours. Archibald gives a detailed report of seven patients with chorea who had tonsilectomies performed within the last three years.

Briefly summarized he found

(1) That the seven patients gave a history either of tonsilitis or inflammatory rheumatism or both;

(2) All presented choreiform movements at the time of operation;

(3) The severity of the symptoms was marked in five patients; six had very large diseased tonsils; one had medium sized tonsils with cryptis;

(4) Four had mitral regurgitation, three had no cardiac lesion.

When the tonsils were removed from these patients not only did the general health improve, but the choreic movements ceased in a remarkably short time. In a very few weeks they were in a different condition both mentally and physically. Another common cause of systemic disease by way of the mouth is in connection with the various pathologic conditions of the teeth. Old roots with cavities filled with decomposing food as well as what is known as Riggs disease are splendid breeding places for all forms of bacteria.

Dr. Rosenau in another paper has shown that iritis and other occular lesions are without doubt due to infection rather than toxic as was the earlier belief as the outcome of a long series of experiments in which animals were injected intravenously under uniform conditions with streptococci from rheumatism, appendicitis, ulcer of the stomach, cholecystitis, erythema nodosum, herpes zoster, pyorrhea, tonsils and from dairy products. He studied the eye lesions in forty-eight animals, and classified them as follows:

(1) Unilateral panophthalmia in five instances, twice following injections of strains from rheumatism and herpes zoster as isolated, and once in each case after one animal passage, and once in a rabbit injected with a streptococcus mucosus from the eyeball in a case of metastatic panophthalmia following tonsilitis and otitis media.

(2) Hemorrhages in the limbus, with or without episcleritis, in fourteen instances, four times following injections of laboratory strains after they had attained a certain grade of virulence, three times with rheumatic strains, twice with strains from appendicitis, twice with strains from herpes zoster, and once each from strains of erythema nodosum, myositis and from butter.

(3) Iritis or irido-cyclitis, nine times, four times after injection of a certain laboratory strain, three times with rheumatic strains and twice following injections of streptococci from small pus pockets in tonsils of otherwise normal individuals.

(4) Conjunctivitis, usually bilateral occurring frequently. In ten instances associated with the streptococci injected (once each with streptococci from appendicitis, herpes zoster and rheumatism, once with streptococci from butter, once with streptococci from the pus pocket in the tonsil of a cow, twice after injection of a laboratory strain and three times after injection of strains from pus pockets in tonsils from approximately 100 individuals.

(5) Ulcer of the cornea due to the organism injected observed only once, after injection of a strain of streptococcus from the muscle in calcifying myositis in a man. Lesions with or without herpes in twelve animals injected with the strains from herpes zoster. Herpes of the conjunctiva followed injections of streptococcus from the tonsil in ulcer of the stomach in a cow.

Hemorrhages in the retina were not often looked for, but were found in two instances, moreover, strains from various sources may be made to acquire affinity for the eye.

Appendicitis, gastric ulcer and cholecystitis may now be produced at will. I have cited all these various experiments to show that as physicians when called to treat a case of systemic infection, it is our first duty to look for the focus of infection, and if possible eradicate it.

My experience during the past epidemic of the various acute infections has been no different than that of other doctors here and with *very, very* few exceptions all of the cases that I saw had a sore throat, either with or without membrane, I made it a point to examine the throat of every patient with special reference to the tonsils, and the variety of cases that I saw included arthritis, bronchitis, endocarditis, pneumonia, erythema-nodosum; and, without exception, there was sufficient clinical evidence that the port of entrance was through the oral cavity.

I saw one rather interesting case of a chronic nature in which the muscles and tendons seemed to be involved. The case resisted various kinds of treatment, and, in fact, is still in trouble, and all because the patient refuses to part with two necrotic teeth which are loose in pus disseminating sockets.

No other focus of infection could be found, and I believe those infected teeth to be the incubator for the particular organism that was producing the symptoms. Because of the failure of tonsilectomy in the past to rid the patient of all the ills and ails to which the human body is heir, it was thought that it was a failure and not justified in many instances. In fact, I was of that opinion myself; but more recently in the light of scientific investigation, I am convinced that if all of the throats were carefully examined and a careful history obtained, one would find sufficient excuse for removing what is surely breeding places for the various bacteria. The recognition of an infected tonsil is often a matter of some difficulty. In making the diagnosis, the mucosa of the surface of the tonsil and of the pharynx should be carefully inspected. The presence of redness and of a granular surface with the openings of the crypts containing pus or caseous material will often be noted. The anterior pillar may be retracted and pressure applied to the base of the tonsil. If the tonsil is diseased, there will be more or less pain, and the patient will flinch from the tenderness of these diseased areas. Caseous materials or droplets of pus frequently exude from the crypts. Such tonsils may or may not be enlarged. I saw Matthews of the Mayo Clinic remove tonsils that to the casual observer did not seem diseased; but he maintained that there was the cause of the various ailments from which the patient suffered and declared that the subsequent examination of the pathologist would bear out his contention. It is a fact that in certain cases tonsil operations have failed to afford the expected improvement. There may be various reasons; however, to account for the failure not the least of which is the incomplete removal of the tonsil tissue. Remnants are left behind and often become covered with scar tissue which entirely seals up the crypts which is thus converted into a dangerous focus of systemic infection. That such is not uncommon is shown by the work of Cocks in conjunction with Superintendent Maxwell of the New York City Schools and Baker of the Department of

Health of the same city. Cocks' summarized statistics are as follows:

(a) Of eighty-nine operated, nine, or approximately ten per cent, received mutilation of the soft parts adjoining the tonsil;

(b) Of twenty-one operated on without general anesthesia nineteen or more than ninety per cent were badly done;

(c) Of fifty-two operated on with anesthesia, twelve or twenty-five per cent were poorly done.

(d) If to this number of cases receiving mutilation are added the number badly operated on both with and without general anesthesia, there will be 26.9 per cent badly done. In addition there were thirty-one children who received further treatment for nasal conditions. What has already been said about the faucial tonsil can be applied to the other lymphoid tissue in the vicinity as well as removing all sources of infection from the gums and teeth; in other words, see to it that the oral cavity is not an ideal incubator for all kinds of bacteria.

When systemic infection has already occurred, the focus should be sought out, and if need be, a suitable vaccine supplied.

A CLINICAL STUDY OF SO-CALLED CARDIAC NEUROSIS.

Read before the Schenectady County Medical Society, April 13, 1915.

By N. A. PASHAYAN, M. D.,
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Under the title of cardiac neurosis, neurasthenia cordis, pseudo-angina pectoris, it has been customary to describe various circulatory disturbances that are looked upon as purely functional and not dependent on any organic disorders. The universal assumption has been that the hyper-excitability of the nervous system is the determining factor and a neurasthenic state explains the morbid manifestations. Within the past few years neuroses and neurasthenia in particular have been sheared of their cloak of mystery and have been resolved into more tangible disease groups. So it is gratifying to see that James Mackenzie, the pioneer student in cardiac diseases, designates cardiac neuroses as the "circulatory disturbances in the X disease," viz., the unknown, ill-understood diseases.

In describing the clinical manifestations of the neurasthenic heart, the following symptoms are prominently mentioned: Palpitations, tachycardia, arrhythmia in the form of extra-systoles, pseudo-angina pectoris, precordial anxiety and also certain vasomotor phenomena such as flushed face, cold and cyanotic extremities.

It is probably true that patients suffering with functional affections of the heart exceed in number those that are the victims of organic lesions. It is also true more often relief is sought by the former than the latter group.

It is reasonable to assume that any ailment, exhibiting itself in a symptom-complex, is an effect and must needs have an underlying cause, be it physical or mental. We are all familiar with the long list of debilitating influences that bring about a condition of neurasthenia and the definition of "irritable fatigueability" has sufficed to cover up the true nature of the malady. Starting with the principle that neurasthenia cordis is an effect, an attempt was made to study all the cases coming under our care during the past six years suffering with this morbidity and ferret out, if possible, the underlying true condition and aim the treatment in that direction. About eighty such cases have been studied.

In the order of frequency precordial anxiety with occasional attacks of stenocardia and extra-systoles head the list, and represent approximately 40 per cent. of our series. It was noticed that the majority of these patients were young married women, apparently in good physical health. A searching examination failed to disclose any abnormality of the cardio vascular system. They were fretful, apprehensive, suffered with a sense of impending mishap and were conscious of an inward trembling. At times a steady ache or a stabbing pain was felt in the region of the left breast accompanied with shortness of breath. By a process of extension, fear of insanity and imminent death made their lives miserable. The age, civic condition of these patients coupled with the frank admission that their illness began soon after their entry into matrimony led naturally into an inquiry into their marital relationship and there lay the whole mischief. The desire to circumvent nature and avoid conception coitus reservatus was resorted to ignorant of the fact that the wives were paying the penalty. Twelve such cases had already been observed when incidentally an abstract of a paper by Hertz in the *Journal of A. M. A.* came under our notice. Therein seventeen (17) cases conforming to the above type were reported and properly designated as "phrenocardia." Since several papers have been published elaborating the same condition.

Three cardinal symptoms, viz., precordial anxiety, stenocardia and dyspnea as the "Triad of Hertz" are looked upon as pathogneumonic of the disease. The pathogenesis of the affection is not hard to understand. The repeated, ungratified stimulation of the libidio affects the cerebral cortex and secondarily the heart. The majority of the patients under proper advice have corrected the evil practice and the so-called neurasthenia cordis vanished like a mist. The same morbidity has been encountered in a few young unmarried women who admitted in indulging in amorous caresses of their fiancés, resulting in an unsatisfied sexual excitement. The same morbid process is in operation in such cases where the husband suffers with partial impotence and premature ejaculation replaces the coitus interruptus. To illustrate: A young woman, age 24, married 18 months, came under our care recently. She enjoyed excellent health until a few months after her marriage. She became restless, unduly excited and slept poorly. The noise from the trolley line annoyed her to such an extent a change to a quieter street became necessary. She was conscious of an "inward trembling," of a sense that something appalling was about to happen. She became fearful, could not be left alone and a constant companion had to be provided. Then certain obsessions were added to her misery. She was doomed to insanity and also that she should commit suicide. While so agitated mentally her heart would beat violently causing pain in the precordium and also dyspnea. Six months' treatment medicinally and also by osteopathy were of no avail. Physical examination was entirely negative. A friendly talk with and advice to the husband transformed the whole clinical picture and at the end of three weeks she was on the road to recovery.

The same abnormal practice is not free from deleterious effect upon the husband and seems to manifest itself in cardiac arrythmia. A young clergyman was conscious of his heart escaping a beat, followed by a violent thud against the chest. He stood in dread of sudden death and consequent train of symptoms were added. He would not listen to advice but a double ovariectomy his wife had to undergo made the necessary change in his habits and he has not had any recurrence of his heart trouble for three years.

The so-called pseudo angina pectoris is often the main outstanding symptom of cardiac neurosis. The differential diagnosis between true and false stenocardia are fully elaborated in all text books. The distinguishing features are that the pain in the latter is located in the left mammary region and not in the sternum, lasts longer, is not distributed to the inner aspect of the left arm and above all it occurs most frequently in neurotic females. In the absence of aneurysms or apparent arteriosclerotic changes we all know how difficult it is to recognize myocardial or coronary degeneration. But how is pain of such a serious nature from nervous origin to be explained?

About thirty per cent. of our cases belonged to this group. In all of them aneurysm, vascular and myocardial disease could be reasonably excluded. Yet there was some abnormal physical state present, usually orthopedic in nature. There are either a neuritis or neuralgia of the fifth or sixth intercostal nerves or more often a general visceroptosis. Curiously enough it is in the milder grades of ptosis that stenocardia seem to obtain and for its detection the examination should be conducted while the patient is standing up and not lying down.

In a very thoughtful paper by C. L. Greene, read before the annual meeting of the Medical Society of the State of New York, April 28, 1914, attention was called to "drop heart, the heart of congenital asthenia." To quote a few passages from his paper: "It is evident that chronic congenital asthenia we deal with a universal constitutional inadequacy which supplies every opportunity for those diverse symptomatic expressions hitherto interpreted as neurasthenia or nervous dyspepsia;" also. "nothing is more striking than the constant association of drop heart with visceroptosis and phthisical type of body structure." He adds—" in but few instances has the writer encountered severe pain, paroxysmal or otherwise, directly attributable to the dilated drop heart, although in a few of the most extreme cases a condition resembling typical heart pang has been encountered."

That drop heart has not received due recognition is attested by the meagre references found in the medical literature. Excluding the cases where the drop heart dilation gives rise to heart pain, general abdominal ptosis is a potent factor in precipitating anginoid attacks. By enjoining rest and supplying proper support to the abdominal viscera relief is secured. The neurasthenic state is not the cause but the effect of long continued physical inadequacy.

Palpitation of the heart is a very important form of cardiac neurosis. Its characteristic feature is that it is perceptible to the patient, may be accompanied by acceleration or not. This perceptibility is not necessarily limited to the cardiac region. Many patients are conscious of it even in their finger tips. Forcible action also is not prerequisite to palpitation. In delirium cordis, in cardiac hypertrophy the impact to the chest wall may cause an upheaval yet not be perceptible to the patient. In palpitation, the so-called functional type, there is in addition precordial distress and anxiety, the carotids pulsate visibly, yet no organic lesions can be made out. Dyspnea, edema, congestion of the liver and other signs of circulatory failure are wanting. In paroxysmal tachycardia we see the most exaggerated example of this condition. There being no unanimity of opinion as to the true nature of this affection, such cases are not included in our list. In studying palpitations of neurotic origin one constant etiological factor has been found in our series and that is hyperfunction of the thyroid. The incidence of this symptom in fully developed cases of Basedow's disease is universally known. It is true, nevertheless, that in the larval stage of this disease, in the " formes frustes," the true significance of this symptom is not recognized. The general excitability of the patient, the tremulous hands, the emotional mobility in the absence of an enlarged thyroid and ocular sighs are apt to create the impression of neurasthenia or hysteria. In our series about 20 per cent. of the cases belonged to this group and the subsequent course of the disease sustained in every instance the original diagnosis.

Much we have learned in recent years about hyperthyroidism, eventuating into Basedow's disease, but of the causes inducing hyperfunction of this gland a great deal more is to be learned. Fear, emotional traumas, excessive venery, repressed desires probably play as important rôles as infections and the reciprocal action of the other ductless glands. Be it as it may, increased heart action, perceptible to the individual, in the absence of organic lesions, in our experience is almost pathognemonic of hyperthyroidism and when not controlled or controllable leads eventually to the matured affection. There is a peculiar facies in these cases, not the bulging or glary eyes, but a furtive, frightened look tinged with anxiety; on slight provocation the heart beats at a rapid pace, the face gets flushed, they are ill at ease, the hands tremble and at times become jerky. To recite a case: A young woman stenographer noticed that on slight provocation her heart would palpitate. Soon her hands became tremulous and experienced considerable difficulty in taking dictation. She consulted two physicians and both assured her that there was nothing wrong with her heart and it was purely "nervousness." When she came first under our observation there were none of the ocular signs of this disease nor any enlargement of the thyroid. The pulse rate averaged 90-100. The outline of the heart, its sounds and the blood pressure were normal. The characteristic facies and tremor of the hands were apparent. Six months later there was perceptible enlargement of the thyroid and Moebius sign easily detected. It may be added that the disease was arrested at this stage and the patient has continued at her work since.

Simple tachycardia is met with in a variety of condiitons. In acute febrile cases, in the excessive use of tea, coffee, tobacco and alcohol as well as in decompensated organic lesions of the heart it is very common. When all similar factors can be eliminated, no case of tachycardia, permanent or transient, should be ascribed to simple neurosis. At times it is the sole guide we possess pointing to the involvement of the vagus. What we wish in particular to emphasize is its importance in relation to incipient pulmonary tuberculosis and involvment of the mediastinal glands. It is often asserted, but perhaps more often overlooked that pulmonary tuberculosis may manifest itself at times in physical signs as well as symptoms. In a case of accelerated pulse, not yielding to the digitalis group, it is incumbent upon us to ascertain the implication of the vagus nerve either by pressure or by toxic action. By auscultating the whispered voice along the spine and taking advantage of the X-ray, the involvement of the post mediastinal glands can be determined. Five per cent. of our cases who were supposed to be suffering with nervous tachycardia were actually victims of tuberculosis.

The only neurosis where cardiac symptoms appeared and where no tangible physical basis could be established was hysteria. These comprise only about 5 per cent. of our cases.

To sum up: While under the leadership of Mackenzie and Lewis and others our knowledge of cardiovascular disease has been greatly enhanced, little progress has been made in the study of so-called functional disturbances, which in point of prevalence and suffering, preponderate the organic lesions. The mistake is being made in taking the effect as the cause and placing them under the mask of a neurosis. Further study may necessitate a recasting of this provisional grouping, but neurasthenia cordis should not be regarded as a disease entity, but a searching inquiry should be made to uncover the underlying pathologic conditions and direct the treatment accordingly.

THE TREATMENT OF MAXILLARY SINUS DISEASE.

Read at the Meeting of the Medical Society of the State of New York, May 17, 1916, at Saratoga, N. Y.

By CLEMENT F. THEISEN, M.D.,
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Only suppurative conditions of the antrum will be discussed in this paper. Benign and malignant growths, retention cysts and other diseases will not be considered.

For convenience in considering the treatment we may divide cases of maxillary sinusitis according to their etiology into three classes—acute, subacute and chronic.

Cases of acute antral infection that are so common during influenza epidemics, and with ordinary acute rhinitis, may perhaps be properly placed in a class by themselves. Very many cases of this kind, perhaps the majority, will clear up, if a policy of not too much interference is followed. I am speaking now of a class of cases occurring largely in young adults, in whom a careful nasal examination does not show any marked pathological conditions, such as hypertrophies of the inferior and middle turbinates, polypi in the middle meatus, or an involvement of the frontal sinus, anterior group of ethmoid cells, or diseased teeth, at the time the acute process in the antrum develops.

Considering cases then in which the maxillary sinus is not simply a reservoir for the collection of pus, from chronic infections in the sinuses just mentioned, we have a class of cases that yield very readily to a very conservative plan of treatment. Our patients, in such cases, usually apply to us for the relief of the more or less severe pain and tension in the region of the affected antrum. We find, when we examine the nose, after it has been carefully washed out, and dried out, and after the patient has kept his head well down between his knees for a few moments, a thin muco-purulent discharge exuding under the middle turbinate. This is true in the majority of the cases, although in some, during the first day or two, we may not see any pus.

In the experience of the writer, a good many of the cases of this kind will clear up, if a cotton tampon soaked with equal parts of a weak cocain and adrenalin solution, is placed under the anterior end of the middle turbinate, with another between it and the septum. These should be left in place each time they are applied, for 10 or 15 minutes. This serves to contract the membrane in the nose, which is always much congested in the acute cases, and will favor better drainage.

The patient is given a spray solution (any mild alkaline solution will serve), to which is added some adrenalin, and is warned to blow his nose carefully and properly, when it is used, so as to lessen the danger of ear complications. Either heat or cold may be applied to the affected side of the face during this stage, and if the pain is very severe, any of the usual drugs may be given internally, but only if the pain cannot be readily borne. I am not in favor of employing any narcotic drugs in these cases on account of the danger of masking symptoms.

If such a conservative plan of treatment does not give decided relief in forty-eight hours, and transillumination gives the usual picture, the antrum should be washed out.

Personally, the writer favors Coakley's modification of the old Myles trocar, the bayonet grip for the attachment of the canula after the antrum has been punctured, being more convenient in the Coakley instrument. In this connection, the writer would most emphatically add his protest against the use of strong irrigating solutions for the acute cases. A sterile normal salt solution, or sterile water to which is added a small amount of alcohol, or a very weak bi-chloride solution, is all that is necessary.

In many cases a single irrigation of the antrum will suffice. In some, if the pain and tension symptoms are not much relieved, the irrigations will have to be repeated. This depends largely on the nature of the infection responsible for the antral condition, and on the character of the pus washed out.

There is a sub-acute form of antral sinusitis following numerous attacks of acute inflammation, in which the antral mucous membrane perhaps never entirely gets back to a normal condition.

If patients have a number of attacks of acute maxillary sinusitis, and many, after the first attack, have a reinfection the next time they have "Grip," steps should be taken to make them less susceptible to attacks of acute rhinitis, which precedes the sinusitis.

In some cases it will be sufficient to remove the anterior end of the inferior turbinate, if there is a marked hyperplasia of the erectile tissue, in others, the removal of the anterior end of the middle turbinate, if it is much hypertrophied, particularly in a narrow nostril, will have a tendency to make them less susceptible to other attacks.

Many acute attacks have a tendency to cause a marked thickening, and in some cases a degeneration, of the antral mucous membrane, and increase the chances for reinfections. It is in this subacute form of maxillary sinusitis, that the semi-radical operations are of the greatest service. In this class of cases, there is more or less discharge from the antrum every time the patient takes cold. An opening through the wall in the inferior meatus, after the removal of the anterior end of the inferior turbinate, or above the inferior turbinate, large enough to remain open for some time, is the ideal operation in this class of cases, and will permit as many irrigations as may be necessary.

A majority of the cases of this type of maxillary sinusitis will be cured by this comparatively simple operation. The opening should be as large as possible, as the formation of granulations closes it very quickly. The large Halle trochar is a good instrument, making a good sized opening which can be easily enlarged.

In considering the treatment of chronic antral suppuration, I will take up first the cases in which the antrum is simply the reservoir for pus from chronically diseased frontal sinuses and ethmoid cells, both of which are frequently involved at the same time.

In these cases *no* method of treatment or operation on the antrum *alone,* without at the same time operating on the other diseased sinuses, will be of permanent benefit. We have all had the experience many times, that antra which we considered chronically diseased and which had been pouring out pus for a long time, have cleared up, with a complete cessation of the discharge, after the proper operative procedures for better drainage from the frontal sinus and for the ethmoiditis, have been performed.

Such results I have observed without doing anything more for the antral suppuration than establishing an opening through the naso-antral wall in the inferior meatus, after the removal of the anterior end of the inferior turbinate, with, of course, frequent irrigations. If this opening is made large enough, the antrum may be examined very readily with the Holmes nasopharyngoscope. The examination with this instrument will give some idea as to whether the simple opening through the naso-antral wall will be sufficient, or whether later on, we may have to do a Caldwell-Luc or a Denker.

There is another class of chronic antral cases in which diseased teeth are directly responsible for the antral suppuration. This is true in a much larger percentage of cases than a study of the literature shows.

A study of sections of skulls shows how easily antral disease may follow caries at the apices of tooth roots, particularly when the molars or pre-molars are involved. The ends of the tooth roots are frequently very close to the floor of the antrum. A patient may have a diseased tooth without special symptoms calling attention to it, for a long time, and a periositis of the alveolar process gradually develops with a softening of the bone, and an extension of the diseased process to the antrum.

The bone between the tooth socket and antral floor, and sometimes on either side of the diseased root, becomes necrotic in a larger percentage of cases than we think. When the tooth is drawn, it leaves an opening leading directly into the antrum, so that a probe can be passed directly up. These cases sometimes clear up after the extraction of the tooth, provided there is no necrosis of the alveolar process. This can sometimes be detected with a probe, or by the foul character of the discharge.

In performing the radical Caldwell-Luc or Denker operation in such cases, it is important to remove all the carious bone in the alveolar process.

Of the radical operations for chronic suppuration, the Caldwell-Luc or Denker give the best results.

Chronic maxillary sinusitis in children presents greater operative problems than in adults.

In children the surrounding bony structures are softer, with a greater danger of orbital and eye complications, or even meningitis, particularly when ethmoid disease exists at the same time.

In young people with very narrow nostrils, it is better to perform some form of radical operation at once without trying intra-nasal operations, which in this class of cases are difficult and uncertain.

A modified Denker operation, in the experience of the writer, is followed by the best and quickest results.

In children particularly, ethmoiditis following measles, scarlet fever, diphtheria and influenza, is a common cause for antral disease, and the ethmoid condition should be promptly dealt with as a preliminary measure.

The ethmoid cells in children are easily broken down with a small, strong curette introduced under the middle turbinate. The curette and a small punch forceps are all the instruments necessary for this operation. It is only necessary, in a small percentage of cases, to remove any part of the middle turbinate in such operations on young children.

Chronic sinusitis, particularly antral suppuration, in the writer's experience, is common after diphtheria, scarlet fever or measles. and often goes untreated for a long time. It is very important in such cases, and, in fact, in all cases where the antral disease is complicated by infection of other sinuses, to get a good radiograph as soon as possible.

In adults, in the chronic cases, the antrum will often be filled with polypi or polypoid granulations, and this condition, with the greatly thickened degenerated mucous membrane, is the reason why irrigations after puncture through the naso-antral wall or after a larger opening is made, do no good.

In the sub-acute cases particularly, if transillumination, after repeated irrigations, still shows a fairly dense shadow, conservative treatment by irrigations if still persisted in, is a waste of time.

The writer is, however, strongly in favor of trying irrigations for a considerable time, through a good-sized opening in the inferior meatus, in cases in which there is *no* disease of the frontal sinus or ethmoid cells, or carious teeth. A large percentage of such cases will clear up under this conservative method. A solution of 1-5000 formalin has been found of great value for washing out.

The internal administration of Urotropin, for which so much has been claimed in general and local infections, in my experience at least, is of very negative value. The large quantity of water and other fluids, given the patients at the same time.

probably does more than the Urotropin. The same may be said for the use of vaccines.

The consensus of opinion seems to be that vaccines, which are at times so valuable in other infections, have not been very successful in sinus suppurations. The successful method of treatment may be summed up in two words, *proper drainage,* with, of course, the removal in the chronic cases, of all other existing sinus suppurations, and all pathological conditions in the middle meatus, particularly polypi.

Tertiary syphilitic lesions, particularly necrosis of the bony walls of the ethmoid cells with a suppurative ethmoiditis and secondary antral infection, must always be thought of in cases that do not readily yield to treatment.

It is surprising in some of these cases how quickly the ethmoid and antral suppuration clears up, when a vigorous course of anti-syphilitic treatment is given.

The writer has had a number of cases of this kind, in which syphilis had not been suspected, which did not clear up after radical operations, and long-continued irrigations, but got well promptly after a course of treatment with iodide and mercury.

The different methods of treatment for maxillary sinusitis have, of course, merely been touched upon in this paper, and no attempt has been made to mention every operation.

In connection with antral infections in young children, Pearce's investigations are of special interest, because they show the frequency of sinus disease with diphtheria and scarlet fever.

Pearce examined the accessory sinuses, particularly the antra, of fifty patients who had died of diphtheria or scarlet fever, in the Boston City hospital. The heads were so sectioned that easy access to the accessory sinuses could be obtained. Thirty-nine cases of diphtheria were examined, and in twenty-five inflammatory changes in the accessory sinuses were found, *i. e.,* both antra in sixteen, both antra, sphenoidal and ethmoidal sinuses in two, one antrum only in five, and the sphenoidal sinus only in two. Of the eighteen double antrum cases, the exudate on both sides, in three, was a thick yellow pus, in three a purulent fluid with membrane, and in one a cloudy serous fluid with membrane. Five cases of diphtheria with scarlet fever were examined, and in two, changes in the antra were found. Of these two, one was unilateral and contained a thick yellow pus. Two cases of diphtheria with measles were examined, and both antra in each case contained a seropurulent fluid. Four cases of scarlet fever were examined; one antrum was normal, in one case there was a double empyema, and in another both antra and the sphenoidal sinus, contained greenish pus. The fact that cultures from the sinuses showed the presence of the diphtheria bacillus, which in some of the cases on record persisted for months, and even several years, is of great interest. Another interesting point in connection with our subject is this, that Pearce's investigations prove that very young children, in whom the sinuses are but slightly developed, as was the case in many of the cases reported by him, may have a sinus empyema following certain acute infectious diseases, which is often overlooked for a long time.

Editorial

> The island of St. Jago, at the Cape de Verds, offers another strongly-marked instance of a country, which any one would have expected to find most healthy, being very much the contrary. I have described the bare and open plains as supporting, during a few weeks after the rainy season, a thin vegetation, which directly withers away and dries up: at this period the air appears to become quite poisonous; both natives and foreigners often being affected with violent fevers. On the other hand, the Galapagos Archipelago, in the Pacific, with a similar soil, and periodically subject to the same process of vegetation, is perfectly healthy. Humboldt has observed, that, "under the torrid zone, the smallest marshes are the most dangerous, being surrounded, as at Vera Cruz and Carthagena, with an arid and sandy soil, which raises the temperature of the ambient air." On the coast of Peru, however, the temperature is not hot to any excessive degree; and perhaps in consequence, the intermittent fevers are not of the most malignant order. In all unhealthy countries the greatest risk is run by sleeping on shore. Is this owing to the state of the body during sleep, or to a greater abundance of miasma at such times? It appears certain that those who stay on board a vessel, though anchored at only a short distance from the coast, generally suffer less than those actually on shore. On the other hand, I have heard of one remarkable case where a fever broke out among the crew of a man-of-war some hundred miles off the coast of Africa, and at the very same time that one of those fearful periods of death commenced at Sierra Leone.
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> *The Voyage of the Beagle.* CHARLES DARWIN.

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Infantile Paralysis

The extensive epidemic of this disease now raging in the city of New York, and especially in the borough of Brooklyn, makes a consideration of it timely. The authorities of the city and state are working assiduously, but rather blindly, it seems, to stamp out the epidemic. In doing so they are applying all methods which have been found to be of use in preventing the spread of other infectious diseases. We know, however, that each infectious disease spreads in one way and, in general, in one way only. To prevent the extension of the disease one avenue of its dissemination must be closed and, if that avenue is efficiently closed, other precautions are not only unnecessary but entirely useless and irksome and for no good purpose. Thus, tuberculosis spreads only through the sputum of a tuberculous patient and, possibly, also through the milk of tuberculous cows. If all tuberculous sputum were burned and the use of all infected milk were prohibited the disease could not spread. Typhoid fever spreads only through the excreta of a typhoid patient, usually in water, and through such water in the milk cans; perhaps also through flies, but always the infectious matter comes from the excreta of a typhoid patient. If all the excreta were disinfected or destroyed, typhoid would be banished. Malaria spreads only through the bite of an anopheles mosquito who has previously bitten a malarious patient. If every person suffering from malaria were protected from mosquitoes, the community would be protected from the disease and the disease would cease to exist. If a person be protected from these harmful agencies he will be perfectly protected from these diseases and need take no other precautions. Unless he is protected from these things all attempts to build up his system or attempts at cleanliness and personal hygiene are in vain. These statements will also in time probably be found true in the case of poliomyelitis.

The object of this editorial is to call attention to a possible source of infection in poliomyelitis, which seems to be relatively neglected in the present campaign, and yet which may be found to be the main avenue of the spread of the disease.

Facts. Acute anterior poliomyelitis consists of an acute inflammation in the anterior horns of the gray matter in the spinal cord and in the motor cranial nuclei, together with secondary degeneration of the corresponding motor nerves, and associated with meningitis in, and in the neighborhood of, the anterior median fissure of the cord. This inflammation may be limited to small foci or may extend throughout the entire length of the cord.

There is much proof that the germ of this disease has been isolated, cultivated and inoculated into monkeys with a positive result; but this proof has not, as yet, been widely corroborated. This germ has been found in the body only in the nervous organs, especially in the cord and brain-stem, and in the alimentary tract: the nose, throat and intestines and very rarely in any other internal organ. It has also been found in the mouths and throats of persons not suffering from poliomyelitis and in some such cases the germs have been proved to be virulent by inoculation into monkeys. These germs usually remain in the nose and throat a month or two after the acute stage, but have been found in some cases after five and six months.

The disease occurs both sporadically and in epidemics. The epidemics do not extend over a large portion of the country, but remain stationary in comparatively small areas, and are especially apt to occur in isolated rural communities. An attack of the disease apparently confers future immunity upon the patient.

The disease occurs especially in very hot weather. Eighty per cent of all cases occur between June the first and November the first.

The disease occurs in individuals of all ages, but is especially prevalent in infancy: twenty per cent. in the first year of life, thirty-three per cent. in the second year, twenty-five per cent. in the third year, ten per cent. in the fourth year, six per cent. in the fifth year, and six per cent. in the rest of life. Thus seventy-eight per cent. occurs in the first three years and ninety-four per cent. in the first five years. These percentages vary somewhat in different epidemics, but in all, the overwhelming majority of cases occur in children under five years of age. Many contagious diseases occur much more frequently in children than in adults, but in none is there anything like such an overwhelming preponderance in infants.

THEORY. Infants being almost exclusively attacked, the infection must spread, apparently, through some agent to which infants and young children are especially, and adults are rarely, exposed. Infants lead such sheltered lives that there are not so very many noxious agents to which they are exposed; and it is of interest to study which of these agents can best explain this difference in the occurrence of the disease in children rather than in adults.

Immunity. It may be that adults, although they were susceptible in infancy, acquire immunity from this disease. But in other diseases immunity is obtained by undergoing an attack of the disease, or by being exposed many times and suffering perhaps from abortive attacks. Poliomyelitis is, however, such a rare disease, and so comparatively few persons are exposed to it, that immunity could hardly be obtained in that way.

Communicability (direct by contact or indirect by air). If the disease spreads by direct or indirect contact, as from secretions from the mouth or nose, it would be likely to run through the adults and the other children of the family and through babies in close contact with each other, as in hospital wards. This does not seem to be the case; indeed, it is the greatest rarity to have two cases in the same family, even when more than one child are under five years. In this respect there is a great contrast between infantile paralysis and the communicable diseases, scarlet fever, measles, whooping cough, diphtheria, etc., which run through families and attack persons of all ages, although more especially children. It would be almost unheard of to find a large number of cases of communicable diseases in Brooklyn and very few in Manhattan.

Insects. Even though children are not as well able to protect themselves from insect bites as are adults, yet, certainly, the disease would spread by this means fully as easily to adults as to children. Malaria, relapsing fever, etc., diseases which are well known to be spread by insect bites, do not attack children any oftener than they do adults; not nearly so often, indeed.

Water. Infants drink much less water than older children and adults. These latter ought, therefore, to be equally affected. Typhoid fever and cholera do not spare adults and attack mainly infants, but quite the reverse. If the water were at fault, in the present epidemic the borough of Manhattan should suffer as much as the borough of Brooklyn.

Food. Milk is the only article of food which infants take far in excess of adults, especially uncooked milk. The fact that older children and adults do take milk would account for the disease occasionally attacking them. Of course, normal milk never causes this disease, but milk and cream and their products are a fertile soil for the growth of germs and consequently often contain toxins. Ice cream not infrequently contains toxins which convert Sunday school picnics into epidemics, causing many deaths and violent attacks of disease; and cheese, at times, causes sudden attacks of sickness and speedy death with symptoms of paralysis, especially of the motor cranial nerves. In a recent fatal epidemic in Cherry Valley, in which the *Bacillus Botulinus* was isolated from the cheese and the virulence of itself and its toxins was proved by animal experimentation at the New York State Antitoxin Laboratory, the symptoms, as observed by Dr. J. M. Mosher, were fever and paralysis of the motor cranial nerves without sensory paralysis and with general and great motor weakness. This does not mean that poliomyelitis is identical with botulismus, but only that organisms can grow in milk and its products which produce fatal diseases somewhat analogous with poliomyelitis. In favor of the theory that poliomyelitis may be due to contaminated milk are:

(*1st*) Uncooked milk is the common food of infants and the exceptional food of adults.

(*2nd*) If a small amount of milk, or of its products, be contaminated, sporadic cases may occur; and if the amount be large, epidemics may occur. In this way, it is easy to understand how a sporadic case may occur in a region where there have never been other cases, and where there is no possibility of personal communicability, direct or indirect, and no insect bite.

(*3rd*) The epidemics do not spread widely over the country, but are limited to the distribution of the contaminated milk or its products.

(*4th*) The epidemics are most likely to occur in hot weather, when milk and cream are most likely to spoil, and when germs grow in them most readily.

(*5th*) Infants are more likely to be attacked than adults, because infants live more largely on uncooked milk than do adults, and are less apt to recognize, and refuse to take, spoiled milk or cream.

(*6th*) The children of the poor and of the unclean are more commonly attacked than the children of the rich, which may so happen, because in the former class the milk is more likely to be contaminated; although such contamination is well known to occur in the class of rich persons also.

(*7th*) Epidemics are relatively more extensive and frequent in isolated rural communities, where milk and its products are abundant, than in cities.

(*8th*) The minute organisms, which are supposed to cause this disease, have been found in the body, in the nervous system, where the disease which they cause is located, and in the alimentary canal: nose, throat and intestines, and very rarely elsewhere. Their presence in the alimentary canal may indeed be due to their passage from the meninges into the nose, but may also indicate that they gain entrance into the human body with the food, which, in the case of infants, is mainly milk.

(*9th*) These organisms have been found in the noses, mouths and throats of healthy persons, which would indicate that drinking vessels and other receptacles containing milk might be contaminated by such persons drinking from or handling them.

Conclusions. The method and manner of the spread of poliomyelitis can only be discovered by patient clinical experience and laboratory investigations combined. *A-priori* reasoning cannot solve the problem, but can only be of use in helping us to formulate the question to be solved and to select the path of attack.

From this abstract of what we know about the subject, it would seem that a possibly fruitful study would be in the direction of the milk supply, which seems to have been greatly neglected; to study the general reaction of milk to these germs and the products of this reaction; to learn whether the disease occurs in children who exclusively and invariably nurse from the breast; to learn whether the same milk is distributed to many families in which the disease occurs, which is less important than to examine the receptacles in which the milk is kept as regards cleanliness and as regards the presence of toxins and germs and as to the nature of these latter; to have a careful chemical and bacteriological examination made of the milk which the infected infants were in the habit of drinking.

It is true that the milk sold in New York City is generally pasteurized, but even sterile milk, if placed in a dirty vessel near a fire or in a hot place, may very soon contain billions of bacteria and their toxins. Therefore the milk should be either pasteurized or boiled just before it is used. How the germs of this disease may pass from the body of a patient to the milk may be difficult to trace, but we know that the germs of poliomyelitis have been found in the nose, mouth and throat of healthy persons, and have been cultivated and have been injected into monkeys and have caused the disease; so that these germs may well be widespread. Furthermore we know that the infectious diseases, in the great majority of cases, are caused by germs which leave the body of a person suffering from the disease, live for a time in the world and enter the body of another person and cause the same disease; but we also know that the germs of a few infectious diseases occur in the world and live entirely outside of the human body. Such germs are the bacilli of tetanus, of malignant edema, and those of some cases of anthrax. These and other similar investigations can only be made by those in authority with their laboratories and their experts. But they would, very possibly, be of greater value than the present system of excessive isolation and quarantine, because, if there is one thing we do know about the disease clinically, it is that it is not contagious.

It is certainly noteworthy that in all the present discussion and agitation, so little attention has been paid to the remarkable peculiarity that this disease attacks, almost exclusively, infants: hence its name, *Infantile Paralysis*.

July 12, 1916. HENRY HUN.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, JUNE, 1916.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Cases.

Consumption	14
Typhoid fever	1
Scarlet fever	0
Measles	0
Whooping cough	0
Diphtheria and croup	0
Grippe	0
Diarrheal diseases	6
Pneumonia	2
Broncho-pneumonia	4
Bright's disease	19
Apoplexy	6
Cancer	8
Accidents and violence	7
Deaths under one year	14
Deaths over seventy	26
Total deaths	133
Death rate	14.71
Death rate less non-residents	12.94

Deaths in Institutions.

	Non-Resident.	Resident
Homeopathic Hospital	3	5
St. Peter's Hospital	2	7
Albany Hospital	4	9
Albany Hospital Camp	0	2
St. Margaret's House	1	0
Maternity Hospital	0	3
Home for the Aged	1	0
Albany County Hospital	2	0
Public places	3	0
	16	26

Births	177
Still births	2

Bureau of Communicable Disease.

Cases Reported.

Typhoid fever	6
Scarlet fever	15
Diphtheria and croup	2
Chickenpox	14
Measles	116
Whooping-cough	4
Tuberculosis	39
Mumps	60
Septic sore throat	1
Puerperal septicaemia	2
Total	259

Number of days quarantine for scarlet fever:
Longest...... 40 Shortest...... 30 Average...... 31
Number of days quarantine for diphtheria:
Longest...... 20 Shortest...... 20 Average...... 20
Fumigations:
Houses.................. 34 Rooms.................. 337
Milk bottles disinfected.................................... 278

Communicable Disease in Relation to Schools.

	Reported	
	S. F.	M.
Public School No. 1	..	1
Public School No. 2	..	7
Public School No. 3	..	2
Public School No. 6	1	11
Public School No. 7	1	1
Public School No. 8	..	5
Public School No. 9	1	..
Public School No. 12	..	2
Public School No. 13	..	1
Public School No. 15	2	..
Public School No. 16	1	..
Public School No. 18	1	..
Public School No. 20	..	1
Public School No. 21	1	..
Public School No. 22	1	6
St. Joseph's Academy	..	2
St. Mary's School	..	1

Tuberculosis.

Living cases on record June 1, 1916............................ 534

Cases reported:		
By card	37	
Dead cases by certificate	2	
		39
		573
Dead cases previously reported	12	
Dead cases not previously reported	2	
		14
Living cases on record July 1		559
Total tuberculosis death certificates filed during June, 1916		14
Non-resident deaths		0
Resident deaths		14

Cases of Communicable Disease Visited.

Tuberculosis	40
Measles	5
Scarlet fever	2
Total	47
Physicians visited	27

BENDER LABORATORY REPORT.

Diphtheria.

Initial positive	2
Initial negative	118
Release positive	0
Release negative	7
Suspicious	3
Total	130

Sputum for Tuberculosis.

Positive	17
Negative	47
Suspicious	1
Total	65

Widals.

Positive	6
Negative	9
Suspicious	7
Total	22

Wassermann tests	76
Milk analyses	77
Tests for preservatives in milk	41

BUREAU OF NUISANCES.

Complaints made	81
Inspections	101
Plumbing	47
Sanitary	54
Reinspections	158
Plumbing	40
Sanitary	118

HEARINGS.

Cases heard before health officer	22
Disposition of cases:	
Abated	20
Ordered for reinspection	2

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	268
Old houses	91
New houses	177
Permits issued	130
Plumbing	95
Building	35
Plans submitted	71
Old buildings	19
New buildings	52
Houses tested	55
Houses examined	30
Re-examined	87
Complaints valid	17
Complaints without cause	13

DEAD ANIMAL REPORT.

Horses removed	17
Dogs removed	195
Cats removed	339
Pig	1
	552

Bureau of Markets and Milk.

Public market inspections	22
Market inspections	128
Fish market inspections	15
Packing house inspections	1
Slaughter house inspections	1
Hide house inspections	3
Fish peddler inspections	6
Milk depots inspected	11
Milk cans inspected	135
Stores inspected	94
Wagons inspected	58
Lactometer readings	138
Temperature readings	138
Fat tests	97
Sediment tests	112
Chemical tests	87
Bacterial counts	87
Complaints investigated	2

Miscellaneous.

Cards posted for contagious disease	95
Cards removed	113
Notices served on schools	259
Notices served on stores	128
Notices served on factories	23
Postal card returns sent to doctors	95
Postal card returns received from doctors	85
Inspections and reinspections	102
Work certificates issued to children	104
Vaccinations	42
Garbage collected from first district (bbls.)	512
Garbage collected from second district (bbls.)	442
Cases assigned to health physicians	59
Calls made	116

Medical News

Edited by Arthur J. Bedell, M. D.

Albany Guild for the Care of the Sick.—Department of Visiting Nursing.—Statistics for June, 1916.—Number of new cases, 182; classified as follows: Dispensary patients receiving home care, 6; district cases reported by health physicians, 6; charity cases reported by other physicians, 76; moderate income patients, 61; metropolitan patients, 33; old cases still under treatment, 501; total number of cases under nursing care during month, 683. Classification of diseases for the new cases: Medical, 27; surgical, 9; gynecological, 5; obstetrical under professional care—mothers, 42; infants, 41; eye and ear, 0; skin, 0; throat and nose, 0; dental, 0; infectious diseases in the medical list, 58; infectious diseases in the surgical list, 0. Disposition: Removed to hospitals, 3; deaths, 21; discharged cured, 98; discharged improved, 25; unimproved, 18; number of patients still remaining under care, 518.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 0; nurses in attendance, 2; patients carried over from last month, 1; new patients during month, 2; patients discharged, 2; visits by head obstetrician, 0; by attending obstetrician, 20; by students, 0; by nurses, 18; total number of visits for this department, 38.

Visits of Nurses (all departments).—Number of visits with nursing treatment, 1,262; for professional supervision of convalescents, 681; total number of visits: pay cases, 685; charity cases, 577; unrecorded cases, 681; cases reported to the Guild by 3 health physicians, and 41 other physicians, graduate nurses 7, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 82; new patients, 161; old patients, 401; total number of patients treated during month, 562. Classification of clinics held: Surgical, 11; nose and throat, 8; eye and ear, 18; skin and genito-urinary, 5; medical, 14; lung, 3; dental, 0; nervous, 0; stomach, 3; children, 12; gynecological, 8.

THE THREE "C'S" OF CARING FOR MILK IN THE HOME.—The three "C's" for the proper care of milk in the home, according to the dairy specialists of the U. S. Department of Agriculture, are:

$$\text{Keep milk}\begin{cases}\textit{C}\text{lean}\\ \textit{C}\text{old}\\ \textit{C}\text{overed}\end{cases}$$

Milk is a highly perishable food and the length of time it will remain sweet and safe, especially for children, depends, the specialists say, almost entirely upon the constant care it receives from cow to consumer. Milk passes through three agencies—the producer, the dealer, and the consumer. If the first two have done their part, clean, safe milk will be delivered, thoroughly chilled, to the consumer. The consumer's responsibility begins the moment the milk is delivered at his doorstep.

Because milk poured from vessel to vessel on the street is very liable to contamination from dust, manure particles and germs, milk is best delivered in capped bottles. If bottled milk cannot be obtained, the housewife should try to have someone in the family receive the milk in a clean, scalded utensil, cover it instantly, and put it without delay into the refrigerator, or the coldest available place. Under no circumstance should an uncovered pitcher, bowl or pan be left out on the porch to receive bulk milk. The vessel, both before and after the milk is poured into it, is accessible to flies and collects particles of dust and dirt.

Even in the case of bottled milk, however, the consumer must see that the bottle is not left out in the heat for a moment longer than is necessary. Milk should be delivered and kept at a temperature of 50° F. or lower—the colder the better. At such temperatures bacteria develop very slowly and milk undergoes little change until consumed. A slight rise in temperature above this point, however, permits bacteria to multiply rapidly and brings about rapid deterioration of the milk, which may render it unfit for ordinary use and make it highly dangerous for babies and little children. For this reason bottled or other milk should not be allowed to remain in a warm place, as on a sunny porch or in a hot kitchen, for a moment longer than is necessary.

Delivery of milk in hot weather.—In hot weather the best plan is to have the milkman put the milk directly into the refrigerator, because at that time of year milk cannot be kept properly without ice. If a refrigerator is not available, provide a small box containing ice, and if ice is unobtainable, provide some tight container with insulated walls that keep the heat from getting rapidly to the cold milk. A home-made fireless cooker is admirable for this purpose, especially if partially filled with ice. In the absence of any of these devices, arrange with the milkman not to leave the milk in the sunlight, but to put it in the coolest, shadiest place around the house.

Handling milk in the home.—In handling milk around the home, do not pour it from one vessel to another until it is to be consumed. Do not let the bottle of milk remain out of the refrigerator a moment longer than is necessary. Keep the milk covered, using paper caps or an inverted tumbler on bottles, or storing it in covered utensils. Any household utensil that is to be used as a vessel for keeping milk should first be cleaned thoroughly and scalded.

Before opening a bottle of milk, wash and wipe the neck and outside of the cap with water and a clean cloth. The little depression on the top of the cap may collect dust or water and any milk that leaks out may attract flies. Lift out the cap with a pointed instrument, so that the outside of the cap, which may be contaminated, will not be pushed down into the milk. Each time the milk is to be poured from the bottle it is a wise precaution to wash the neck as described.

Milk in a refrigerator.—The refrigerator where milk is stored should be cleaned regularly, especial care being given to keeping the drip pipe free and clean. The ice rack also should be cleaned and any place where food is kept or milk stored should be scalded occasionally with sal-soda solution. The refrigerator, even though cold, may quickly be contaminated by a few drops of spilled milk, or by small particles of food. No matter how clean the refrigerator, milk should never be kept in an open vessel. As milk absorbs odors easily, such food as fish, cabbage, or onions should not be kept in proximity to it.

Clean empty bottles.—As soon as a milk bottle is emptied, rinse it thoroughly with cold water. Do not return dirty bottles and do not use milk bottles except to hold milk. Returning dirty bottles to the milkman may mean that a few days later either you or your neighbors will get contaminated milk. Milk bottles should never be taken into a sick room. In case of infectious or contagious disease, all bottles should be boiled thoroughly and should not be returned to the dealer without the express permission of the attending physician. Such diseases easily can be made epidemic through disregard of this precaution.

Where there are children.—Care of milk, important for all, is a vital necessity in a home where there are children. It is absolutely essential to the safety of babies. No intelligent mother will leave to an ordinary servant the task of caring for or preparing the milk for her baby. Mothers of small children should get, from their own physicians, explicit directions for the proper handling of milk and for cleaning and sterilizing nursing bottles. Pamphlets on infant feeding may be obtained from the municipal milk stations or health officers. Milk for babies cannot be kept too cold, and too much care cannot be given to keeping it clean and covered.

Further information on this subject may be had by writing to the U. S. Department of Agriculture, Washington, D. C., for Farmers' Bulletin 413, "Care of Milk and Its Use in the Home."

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.—The Seventh Annual Session will be held in Philadelphia, October 23d to 28th. The usual clinics will be held every day and the lectures given in the evening.

PERSONALS.—Dr. CHARLES K. WINNE, JR., has removed his office and residence from 222 Lark street to 151 Chestnut street.

MARRIED.—Dr. CHARLES L. NICHOLS (A. M. C. '15) and Miss Carrie L. Hasbrouck, both of Philmont, N. Y., were married July 21. 1916.

In Memoriam

J. SEWARD WHITE, M. D.

Dr. J. SEWARD WHITE, one of the most widely known and most successful physicians and bankers in Northern New York, died June 19, 1916, at his home, 20 Main street, South Glens Falls. He had been in declining health since autumn, but it was not until early in the winter that he was obliged to give up his practice. His death is attributed to anaemia.

Dr. White was born February 2, 1857, in South Berne, Albany county, his parents being James D. White and Mary J. McCleric. He was one of five children. When a boy he moved with his parents to Albany. After a short residence there the family moved to Stuyvesant. At the age of twelve years he and his parents moved to West Township, Albany county. While residing there he attended the Albany Normal College. He graduated from the institution in 1875. After leaving the college he went to Orient Point, L. I., where he taught school for a year. At the close of the school term he went to Cornell University, where he took the A. B. course. From Cornell he went to the Albany Medical College, where he studied medicine. He was graduated in 1880 and after a short stay with his parents in West Township, where his father conducted a grocery store, Dr. White entered the office of Dr. Vander Veer in Albany. In the same year, and with small capital, Dr. White drove to South Glens Falls, where he took up the practice of medicine and where he remained until his death.

In 1882 he married Flora Sweet, daughter of the late S. Mott Sweet and Maria Sweet. By this union there were three children, Seward, Guy and Gladys, the two former having died while quite young.

During Dr. White's residence in South Glens Falls he held several town and village offices. On several occasions he was town and village health officer and also a member of the village board of trustees. He was a member of the Methodist Episcopal church and of its board of trustees.

When the movement was started to organize the First National bank in South Glens Falls Dr. White was one of the most active promoters. The bank was organized in 1891, and since that time he has been its president.

In 1902 his first wife passed away and in 1907 he married Miss Florence Lockwood of Brooklyn, by whom he is survived, with his daughter, Gladys (Mrs. Clarence William Deal) of Ausable Forks, and his mother, Mrs. James D. White.

Dr. White was affiliated with several medical associations. He was a member of the American Medical Association, the New York State Medical Association, the Saratoga County Medical Association and the New York State Association of Sanitary Officers. For a number of years Dr. White was a member of the staff of physicians of the Glens Falls Hospital. With Dr. Charles S. McLaughlin he performed the duties of house physician several years.

He was patron of the J. S. White Hose company, one of the most prominent hose companies in the State. A few months before his death, when the hose company held its annual fair and carnival, the firemen assembled in front of the doctor's residence and Governor Whitman opened the fair, went to the doctor's bedside and carried messages of good will from him to the fire laddies.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Diseases of the Skin. By HENRY H. HAZEN, A. B., M. D., Professor of Dermatology in the Medical Department of Georgetown University; Professor of Dermatology in the Medical Department of Howard University; sometimes Assistant in Dermatology in the Johns Hopkins University; member of the American Dermatological Association. Two hundred and thirty-three illustrations including four color plates. St. Louis: C. V. Mosby Co., 1915.

As the author states, this book is intended for students and general practitioners in the belief that the large works are too voluminous and that it is, therefore, difficult for the inexperienced reader to grasp the essential facts. The smaller books, on the other hand, are regarded as rather exaggerated quiz compends.

This small book includes a simple account of the histopathology of many of the skin diseases and includes a limited bibliography almost exclusively of American authorities. The illustrations are excellent and the descriptions of the various diseases very concise.

This book gives one a good idea of the prevailing opinion regarding the common and many of the unusual skin diseases. Considerably more space is devoted and detail given to the more important skin diseases which are frequently encountered. T. O.

Materia Medica, Pharmacology, Therapeutics, Prescription Writing for Students and Practitioners. By WALTER A. BASTEDO, Ph. G., M. D., Associate in Pharmacology and Therapeutics at Columbia University. Pp. 600. Philadelphia and London. W. B. Saunders Company.

The book is an adaptation, for the most part of lectures delivered at Columbia University. The author emphasizes throughout the value of research, both in the laboratory and at the bedside. Everywhere in the work his pharmocologic experimentation and research form a striking contrast to the contents of many other text books of similar title.

Perhaps the most commendable feature of the work is the 100 page chapter on the circulation. This is replete with accurate polygraphic tracings, illustrating the digitalis effect in heart block, auricular and ventricular extrasystole, auricular fibrillation, and paroxysmal tachycardia. The physiology of the conduction system is likewise dealt with in a masterly manner.

It is a source of gratification to note that the author points out for rectal feeding the utility of the amino acids, such as tyrosin, histidin and arginin, representing as they do, the end-products of protein digestion, and warning against the too frequent use of egg yolk as a means of rectal alimentation.

The fact that alcohol is not an antidote for systemic phenol poisoning is emphasized by Bastedo; but it will probably be some time before many of us cease to rest content with the dosing of the carbolic acid victim with whiskey.

Bastedo is to be congratulated in having combined science with clearness and brevity with completeness; his book is a valuable addition to the medical student's armamentarium. N. K. F.

Sexual Impotence. By Victor G. Vecki, M. D., Consulting Genito-Urinary Surgeon to the Mt. Zion Hospital, San Francisco. Fifth edition, enlarged. 12 mo. of 405 pages. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $2.25 net.

That a never failing professional interest attaches to this subject is proven by the fact that this volume has run through five editions in a little over a decade. The subject is presented in a semi-popular manner so that a considerable part of its subject matter is reasonably intelligible to the lay reader which doubtless explains in some degree the popularity of the work.

The author presents a comprehensive, well balanced and sane consideration of the subject and carefully avoids any semblance of the quackery so intimately associated with this subject. Every practising physician or surgeon comes constantly into contact with individuals more or less impotent to whom he must give advice, and a knowledge of the contents of this book will enable him to give this advice in a more rational and intelligent manner. The volume which comprises about 400 pages is subdivided into nine chapters, the first of which deals with the anatomy, followed by a chapter on the physiology of the sexual act. The etiology of impotence is next considered and this is followed by rather an exhaustive description of the forms of impotence. The diagnosis, prognosis and prophylaxis occupy short chapters, following which is a long chapter on the treatment in which practically all the therapeutic measures of any importance are described. It will be seen that nothing has been omitted which would add special value to the work and we believe that it fulfils a distinct medical and social need.

A. W. E.

NEW YORK STATE MEDICAL LIBRARY.

Edited by Frances K. Ray.

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Great Britain. General medical council. Medical register. 1915.
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Hoffman, F. T. Mortality from cancer throughout the world. 1915.
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The following sets have been completed:

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Archives of ophthalmology.
Ophthalmic record.
Praktische Ergebnisse der Geburtshilfe und Gynäkologie.
Southern medical journal.

New current periodical:

Grace hospital bulletin. Detroit.

SURGICAL PATHOLOGY.

Edited by George E. Beilby, M. D.

Renal Cancer Associated with Renal Stone.

John R. Coryell. *Bulletin of The Johns Hopkins Hospital, April,* 1915. *Vol. XXVI-N, page* 93.

The object of this paper was not to advance a new theory to discredit an old one, but to record the macroscopic and microscopic findings in kidneys, the seat of both stone and cancer.

The method of procedure has been as follows:

1. Review of the primary pathologic diagnosis which was made on frozen sections stained with Unna's polychrome methylin blue in the diagnostic laboratory immediately after removal of the organ.
2. Study of the gross specimen.
3. Microscopic examination of sections from cortex, medulla and pelvis of specimens kept in 10 per cent. formalin frozen and stained with hematoxylin and eosin; also of serial paraffin sections of many specimens stained with Sudan III and Scharlacher, and with Weigert and Van Gieson.

The study covers all cases of renal cancer and renal stone from which tissue was removed in the Mayo Clinic from January 1, 1905, to July 1, 1914, a total of 145 cases, of which 131 were of stone only, 5 of cancer only, and 9 of cancer associated with stone.

As a result of careful study and analysis of these cases the following summary may be made.

1. Renal epithelium (tubular and pelvic) not infrequently regenerates.
2. Renal tubules regenerate not infrequently as a whole.
3. The stages of development of renal epithelium under the influence of or as a result of irritation which is constant and prolonged are (1) normal, (2) inflammatory, (3) hyperplastic, (4) neoplastic (which may be either benign or malignant). In the kidney there seems to be no distinct line of demarcation between certain stages or phases of a chronic-inflammatory process and neoplastic formation, and it is impossible to say where normal processes cease and neoplastic processes begin.
4. The preparatory phenomena of renal new-growth seem to take place not in the area actually irritated, *i. e.*, not in the area which shows actual inflammatory reaction, but just beyond the same.
5. Even if heredity plays the same rôle in human cancer as it seems to play in mouse cancer, chronic irritation in the kidney is still of very great importance, in that it determines the location of the neoplasm.
6. There is, at times, an attempt on the part of the neoplasm to mimic the structure of the kidney by a columnar arrangement of cells and the formation of a lumen.
7. Renal cancer develops from the epithelium, both of the pelvis and of the tubules.
8. In all specimens studied, the kidney in some portion showed an inflammatory reaction. The destruction of the renal substance varied in degree and was brought about by interstitial or parenchymatous changes or both; and suppuration was of frequent occurrence.
9. The epithelial lining of renal tubules may, under the influence of renal stone, (1) necrose, (2) form cysts, or (3) become malignant.
10. After having seen the gradual changes from normal tissue to inflammatory, from inflammatory to hyperplastic, and from hyperplastic to neoplastic, it appears probable that the chronic irritation brought on by the stones was the direct cause of the cancer.

11. In all the cases of renal cancer associated with renal stone, a large, light, fat-containing cell is found, sometimes singly, sometimes arranged in groups, and sometimes in definite columns. It has its origin in the tubules of the kidney. Further study will be made of this cell.

12. Of the total number of kidneys with cancer removed at the Mayo Clinic, 64 + per cent. were associated with stones and 35 + per cent. were without stones.

Studies in the Circulation of Man.

G. N. Stewart. *The Journal of Experimental Medicine, July,* 1915. *Vol. XXII, No.* 1, *page* 1.

Stewart in a careful and painstaking study of this subject has determined that in cases in which great inequalities in the blood flow in the two hands were produced by mechanical causes (ligation or compression of vessels, embolism), the stability of the ratio of the flows, in successive measurements at short intervals, was found to be characteristic. Over long intervals the opening up of collateral circulation or the progressive increase of the block (in a case of multiple embolism with thrombosis) was followed by changes in the ratio of the blood flows in the normal and the affected part. Another criterion of these conditions was found to be that the inequality was not abolished by producing general vasomotor changes; *e. g.,* by altering the external temperature.

Also, in certain cases inequalities in the blood flow in the two hands (or feet) were found which were not stable from day to day, and which could be abolished, reduced, increased, or reversed by alterations in the external conditions which bring about general vasomotor changes. These inequalities, not associated with clinically recognizable differences between the parts compared, were interpreted as due to unequal activity of the vasomotor mechanism on the two sides. The condition appeared to be most frequent in certain groups of neurological cases.

The Influence of Removal of the Adrenals and One-sided Thyroidectomy upon the Gastric and Duodenal Mucosa: The Experimental Production of Abrasions, Erosions, and Acute Ulcers.

G. A. Friedman. *The Journal of Medical Research, May,* 1915. *Vol. XXXII, No.* 2, *page* 287.

The scope of this work consisted of the following experiments: (1) Extirpation of the adrenals in rabbits and in dogs. (2) Extirpation of the adrenal on one side and removal of a thyroid lobe on the same side or the opposite (in one sitting) in rabbits. (3) One-sided thyroidectomy in rabbits and in dogs. (4) Repeated intravenous injections of commercial thyroid gland.

The results of the experiments presented in this communication, and in a previous one (abstracted for a former issue), may be summed up as follows:

1. Adrenal hypofunction causes lesions in the stomach in rabbits and in dogs.
2. An excess of thyroid gland, as produced by repeated intravenous injections, was probably responsible for the gastric lesions of two dogs and of one rabbit (of four animals experimented upon).
3. Thyroid hypofunction caused the appearance of duodenal lesions in five animals out of six.
4. An excess of adrenalin, produced by repeated injections of the drug, led to the appearance of lesions in the duodenum of dogs.
5. The simultaneous production of adrenal and thyroid hypofunction did not lead to any lesions in the stomach, nor in the duodenum in rabbits.
6. When after removal of one adrenal the other became hypertrophied, lesions were seen in both viscera of three rabbits and in the duodenum of one.

From the author's experiments it seems probable that gastric lesions might be dependent upon adrenal insufficiency as well as upon an excess of thyroid gland, duodenal lesions on the contrary upon thyroid hypofunction as well as upon excess of adrenalin. Gastric and duodenal lesions might be dependent upon the alternating effect of hypo- and hyperfunction of the adrenals.

PATHOLOGY AND BACTERIOLOGY

Edited by Ellis Kellert, M. D.

The Functional Significance of Mitochondria in Toxic Thyroid Adenomata.

E. Goetsch. *Bulletin of the Johns Hopkins Hospital, No.* 303, *May,* 1916.

There are occasionally encountered cases of thyroid enlargement accompanied by symptoms of hyperthyroidism and yet the gland on removal and examination by the ordinary histologic methods will show no evidence of increased activity. Hyperplasia of the parenchyma, increased height of the cells, diminished size of the acini with little or no colloid are features that may be totally lacking.

Goetsch applied the methods of Bensley to a case of foetal adenoma in which there were symptoms of nervousness, palpitation and worry and was able to demonstrate an increased number of mitochondrial granules in the cytoplasm of the cells. The mitochondria exist in all cells in the form of minute granules or rods and appear to play an important part in cellular activity. They diminish with age and are very abundant in embryonic cells.

The method was also applied to adenomata which were not accompanied by syptoms of hyperthyroidism and a diminution in the number of granules was found. From these findings it would appear that the mitochondria offer a better index of the functional activity of a gland than the usual histological criteria and an explanation is offered for the occurrence of symptoms of hyperthyroidism with the ordinary thyroid adenomata. E. K.

VOL. XXXVII SEPTEMBER, 1916 No. 9

ALBANY MEDICAL ANNALS

Original Communications

ASSOCIATION OF THE ALUMNI OF THE ALBANY MEDICAL COLLEGE—FORTY-THIRD ANNUAL MEETING.

The forty-third annual meeting of the Association of the Alumni of the Albany Medical College was held in the amphitheatre on Friday, June 9, 1916. The usual informal reception was held in the college library, where photographs were exhibited, and greetings exchanged between the hours of 9 and 11 A. M. Between 10:30 and 11:30 decennial class reunions were held in the rooms assigned. The meeting was called to order by the President, Dr. Maurice J. Lewi ('77) of New York City, at twelve o'clock.

The following named members of the Association, with invited guests, students of the college, and others interested, were present: Alfred B. Huested, William H. Murray, Charles F. Scattergood ('68); D. C. Case ('70); G. L. Ullman ('71); Daniel H. Cook ('73); Henry C. Mereness ('74); Maurice J. Lewi, Marcus M. Lown ('77); John H. Cotter ('78); Ezra A. Bartlett, William E. Lothridge ('79); Stephen C. Burton ('80); Frederick L. Classen, J. H. Mitchell ('81); F. O. A. Palmer, Walter W. Scofield, J. B. Washburn ('82); C. F. Wharton ('83); Robert Babcock ('84); Martin MacHarg ('85); James A. Holley, R. H. McCarty, Joseph S. Parent, J. W. Sheffield ('86); Andrew Macfarlane, Charles H. Moore ('87); John Archibold ('88); J. Montgomery Mosher, F. S. Snow ('89); Edward V. Colbert, Arthur G. Root ('90); Walter H. Conley, Charles E. Davis, W. N. Knowlton, Arthur B. Van Loon ('91); Arthur C. Hagedorn, William G. Lewi, Leo H. Neuman, Clement F.

Theisen ('92); John H. Cotter, 2nd, W. H. George, George W. E. Goodell, Arthur Sautter ('94); William P. Faust ('95); Walter M. Clark, Ira D. Hasbrouck, Erwing Holley, Garrett V. Johnson, E. A. Palmer, J. M. W. Scott, J. C. Sharkey, Henry L. K. Shaw ('96); Edward W. Becker, C. H. Bennett, William L. Fodder, W. J. Sheehan ('97); C. G. McMullen, James F. Rooney, Alvah H. Traver ('98); Christian G. Hacker, Eugene E. Hinman, Joseph A. Lanahan ('99); Arthur J. .Bedell, E. Gerald Griffin, C. Sicard ('01); John H. Gutmann, S. S. Ham, F. C. Reed ('02); F. C. Maxon, James N. Vander Veer ('03); B. K. DeVoe, Malcolm Douglas, William George Keens, Edward A. Stapleton ('04); Arthur P. Clark, C. W. Louis Hacker, George W. Papen, Jr. ('05); George R. Goering, S. B. Grant, C. B. Hawn, W. A. Reynolds ('06); Tiffany Lawyer, William C. Treder ('07); William Fuller Earl, Frank Garten ('08); W. F. Conway, Harry H. Drake, Eddy S. Haswell ('09); M. G. Burch ('11); J. L. Edwards, J. H. Mitchell, Jr. ('12); G. M. Clowe, Rufus B. Crain, E. H. Ormsby, William Rausch ('13); Abraham Ball, George R. Jordy, John S. McCormick ('14); W. L. Grogan, William J. Ryan, Charles K. Tomlinson ('15); Harold A. Peck ('16).

On motion of Dr. MacFarlane, the reading of the minutes of the last annual meeting was dispensed with and the minutes were approved as printed in the ALBANY MEDICAL ANNALS.

The Recording Secretary presented the

REPORT OF THE RECORDING SECRETARY AND EXECUTIVE COMMITTEE.

Two meetings of the Executive Committee have been held during the year.

At the meeting of January 7, 1916, it was decided that the usual exercises of the Association on Commencement Day be held as in previous years. The Treasurer presented a report, showing a balance of cash on hand of $30, with liabilities of approximately $190. A motion was carried that the President be urged to appoint a Nominating Committee, and at his pleasure before the Annual meeting, and the Committee on Revision of the Constitution reported progress.

At the meeting of April 29, 1916, the date of Commencement was announced as June 9th, and the program for the annual meeting of the Association was adopted as follows:

10:30 to 11:30 A. M.—Decennial class reunions.
11:30 to 12—Informal reception and registration.
12 noon—Annual Meeting of the Association.

The President was instructed to send a formal invitation to the graduating class to attend the Annual Meeting in a body, and it was also directed that the Corresponding Secretary send out the usual notices of the meeting to members of the Association and that he be empowered to inform them that in future all notices and information relative to this Association and its meetings would be sent only to members who have paid their dues.

A motion was adopted that the President be empowered to communicate with the Alumni Committee of the ALBANY MEDICAL ANNALS instructing them to investigate and report upon the financial relation between this Association and the ANNALS.

Respectfully submitted,

J. M. MOSHER,
Recording Secretary.

On motion of Dr. Eddy Haswell, the report of the Executive Committee was accepted and ordered entered upon the minutes.

The Treasurer, Dr. Robert Babcock, presented his report for the year, as follows:

TREASURER'S REPORT.

CR.	
Balance on hand May 1, 1915	$10 20
Dues received during year 1915	82 00
Check from banquet committee	24 90
Total	$117 10
DR.	
Various bills paid for which vouchers are presented	$86 25
Balance on hand May 1, 1916	30 85
College Building Fund	$122 28

[Signed] ROBERT BABCOCK,
Treasurer.

On motion of Dr. Bransen K. DeVoe, the Treasurer was directed to audit his own report.

Ex-President Lown was then called to the chair, and President Lewi delivered the following address:

President Lewi's Address.

I take it that we are all of us here assembled to do honor to Alma Mater—to pay homage to her in whose halls were laid the foundation of the life work which has made us recognizable on the horizon of the ordinarily active.

We come back here to measure anew the strides with which we started out to capture the world, and each recurring year our pace in the light of our then ambitions, lessens into insignificance.

It is well-nigh forty years since I left here, a graduated doctor of medicine but without a diploma—that was withheld for almost two years because I was but a trifle over nineteen years of age. I have never since then allowed my interest in the old college to wane. Its walls have always seemed like a haven to me and contemplation of its memories have ever proved an inspiration. Tucker, Curtis and Vander Veer are the only ones left of the faculty of my student days. What a procession of noblemen has gone to its last earthly home from this centre! Armsby, Thomas Hun, Lansing, Mosher, Haskins, Perkins, Townsend, Edward Hun, Seymour, Swinburne, Bigelow, Hailes, Ward and perhaps others whose names do not now occur to me! In this gathering, I find myself one of the old ones where I ever considered myself a boy. You must indulge me if I attempt to speak with the privilege of years, but to act as the student in the halls of the old school.

From a sentimental standpoint, the old school "ain't what it used to be." Its dust-grimed library shelves, its creaky stairs, its foul-smelling dissecting room and its ramshackle cellar held for us recollections that were rendered less realistic with each application of the duster, contained charms which disappeared with each nail driven into a stair post, manufactured odors which modern treatment has transformed into a fragrance of cologne and hid secrets of body-snatching which the scrub-brush and the broom would tend to cleanse from our memories.

How much have we really grown since those early days of search for medical lore? How much have we accomplished to increase the sum of human happiness during these intervening years? What have we done to improve the status of our profession since we are in and of it? These days of rejuvenating are fitting periods for taking measure of ourselves. Medicine has made and is making giant strides. It is safe to state that there is no man in practice more than ten years who is not envious of the vast improvements added to the armentarium of the physician graduated to-day. A two years' course in medicine (no pre-academic qualifications) was all-sufficient for earning the M. D. title in the early seventies of the last century. The medical practice act, which has since become the basis for proper state control of medical practice, the county over, did not go into effect in New York State until 1891 and in many of the other States of the Union, very much later.

When the fight for the law was on in 1890, I happened to be Secretary of the Committee on Legislation of the State Medical Society. I lived in Albany at the time. As a matter of history, the bill creating state control of medical licensure was "kissed" through the Legislature. The personal equation was the controlling factor in determining the issue. The weight of influence was against the measure and that influence had as its basic support a horde of charlatans, advertisers and illegal practitioners who were sure of their predictions of defeat for our measure because of the success of their opposition through decades of previous attempts to corral them and to circumvent their malefactions. We won out simply because we shamed our legislative friends and acquaintances with their past acquiescence in unfit conditions and their association with malodorous elements in the community because of politics and expediency. We put the issue to them on the score of the needs of the public and not on the requirements of the medical practitioner. And so we succeeded.

The question is frequently asked: why is it that medical men whose relations with the public are so potent and so confidential, have so little political and social influence? The reasons are numerous and some of the more important ones occur to me as follows:

(1) The average practitioner of medicine is not properly equipped for his work. Other than the customary academic qualifications of an intending medical student, there should be other preparation of equal or even greater import. Logic and psychology should be a large part of the preparatory study of the intending medical student. The average freshman medic has had no world experience—hence his mind should be trained so that he may learn to be a thinker and a reasoner possessed of the knowledge of what men and women are actually like. Doctors are proverbially the worst kind of business men. This is largely so because they do not understand the genus homo excepting as an anatomic or physiologic or pathologic entity. All other knowledge of the human species comes to them in a mind clothed with the procedure that moves in a scientific groove. We are told of the bickerings and jealousies among medical men—these would be unknown were there a logical brain in the cranium of every medical graduate. The doctor, so equipped, would be a better advisor to his suffering patients, to his distressed friends and to the community in which he resides.

(2) The solidarity of the medical profession is painfully negative. True we have societies galore and publications aplenty, but how lax are the doctors in attendance at their society meetings and how little that is new appears in the medical prints? Most of the societies are such only in name. The reading of papers and the discussion of scientific topics are but prosaic attempts to have some member, whose turn has come, perfunctorily do his stunt and then—next! As to the medical journals: did you ever stop to think of how little of lasting worth in

relation to the employment of medicines for relief and cure has been published since you entered the profession? Think of the tons upon tons of printed matter that have come to you in the form of medical periodicals and tell us how many kernels of truth and how much meat of wisdom you have been enabled to abstract from all of this verbiage so that you might apply it with benefit to your patients! Aye, truth thus isolated is far more rare than the radium teased from earth's plenteous soul. Fortunately in our own publication, THE MEDICAL ANNALS, we have a unique journal. In its pages we find recorded the events of interest marking the progress of the school and accounts of the doings of our fellow-alumni so that we may follow their activities. Fortunate in having as its editor one who is thoroughly equipped in medicine, the ANNALS prints as original articles, only such matter as has been selected because of its newness and on account of its scientific worth. Its quoted articles are from the best and most reliable sources and deal with subjects of daily interest to the practising physician. Its book reviews are comprehensively written and furnish the reader with the gist of the scientific pabulum contained in the newer imprints. As members of the alumni association, we can be proud of the MEDICAL ANNALS because it is a real asset to the profession and as such is a rarity. We should encourage it by helping to increase the number of its subscribers and by sending to it for publication any and all medical work which we may wish to place before the profession.

The remedy for the lack of cohesion among medical men rests with us. We must band ourselves together not only to discuss measures and remedials to cure disease, but to prevent it. Every practitioner of medicine should be a publicist to the extent of keeping abreast of the times on matters pertaining to public health. Prevention of disease should be our constant study. Ours it should be, day and night, to acquaint the public through non-technical writings in lay papers and by word of mouth, with every feature of sanitation which an intelligent public can comprehend and a stupid citizenry *must* learn. Dietary regulations and restrictions should be dinned into the ears of those who can hear so that the race shall continuously improve. Factory inspection, child labor, water supplies, river pollution, the hygiene of the child-bearing mother, the relation of the sexes, the dangers to offspring from the marriage of diseased or defective individuals, and a score of other topics of civic worth and of human and humane interest should be generously discussed in meetings and in public prints thus conveying to the public, hungering for such knowledge, the well-seasoned results of our deliberations on all of these important subjects. Regent Abram I. Elkus's article in the last month's issue of the *Medical Times* (read it if you have not done so as yet) shows that medical men were responsible for the passage of the first law on the statute books of England, regulating the employment of labor. Why should the doctor not continue in this rôle of public benefactor?

(3) The lack of proper contact with the people has made the medical man narrow. He is restricted in his views as to his fellow-practitioner and is far from broad in his consideration of the merits of innovations which do not come to life through the regulation channels. The greater his medical knowledge, the less liberal his viewpoint. There are brilliant exceptions to this rule but unfortunately they are but exceptions. The spirit which nailed Christ to the cross because he taught as essentials, truths which were submerged because of other and less valuable teachings, re-made the world of religion. Had he been encouraged as a leader of thought by those of the then constituted authorities, the history of humankind would have been writ other than in lines of blood. Had the physicians of the time accepted the findings of Hahneman as they related to excessive and nauseating doses of medicine, humanity would have profited fifty years sooner than it did and this foreign physician would not have been immolated on the altar of professional bigotry. Had the surgeons of three decades ago investigated the theories of Still as they applied to mechanical treatment of the spinal muscles and had separated the chaff from the wheat, the absurdities of osteopathy could have been eliminated and the good it contains might have been stamped with the seal of scientific achievement. If electro-therapy, mechano-therapy and hydro-therapy had been earlier investigated by medical men and not been left to the charlatans who commercially exploited such virtues as these therapeutic measures hold, many years of doubt as to their merits would not have intervened. Medical men have for centuries been guilty of a crime against the public in refusing to acquire knowledge as to the so-called minor foot lesions. For ages the public has been permitted to go on suffering with foot woes because the physician and surgeon considered it demeaning to treat such patients. You and I and all of us graduated as Doctors of Medicine, served as internes in hospitals and in many instances took post-graduate courses without acquiring any but the most meagre knowledge of at least two score abnormal foot conditions which were maiming and crippling the public. When I determined upon doing my part to raise chiropody from the trade classes and help place it where it belongs as a legitimate branch of medicine, resigning what was practically a life position as a medical educator, I was scoffed at, was charged with having developed the commercial bug and was told by some of my friends that I was spoiling such career as I had made in professional work. One of my classmates whom I met shortly after I had resigned as Secretary of the State Board of Medical Examiners in order to become the President of the School of Chiropody of New York, the first scientific institution of its kind ever established, upbraided me for becoming a "corn-cutter." Men prominent in the profession who had been my friends through fair and foul weather, were skeptical as to the worth and propriety of the new undertaking. Three and a half years have gone by since this new propaganda was inaugurated and the faculty of this new school contains

on its teaching staff, fourteen licensed practitioners of medicine, who are serving without pay, day in and day out, in rain and in shine in order that men and women may be afforded opportunity to acquire a comprehensive and scientific knowledge of these lesions of the foot which have been tabooed by medical schools. A corps of special lecturers serve the school additionally and in that group are some of the most prominent men in medicine, three of them Deans of New York State Medical Schools and most of the others, professors in Medical Schools. Physicians are now coming to us for education along the lines of this work so that they may engage in practice as foot specialists. Temple University has established a Chiropody Department and additional like schools have been established in San Francisco, Chicago, and Cleveland. We have turned out over two hundred students who are practising podiatry all over the world and most of them, if not all, are making much more money than the average doctor and the public is deriving foot-comfort as it never before experienced it. Of course it is hoped and planned that ultimately every podiatrist will be a graduated doctor of medicine, as should have been the case ab initio, but inasmuch as medical schools refused to instruct along these lines and post-graduate schools of medicine made no provision for providing even clinical instruction in podiatry, there was nothing left for the pioneer medical men who have undertaken this propaganda but to adopt and carry into effect the methods now being employed by the School of Chiropody of New York. The human foot is an integral part of the body. It derives its nourishment from the general economy. Its functions are interdependent on the general body functions. It is affected by constitutional disturbances as well as by local conditions. It follows that no one can be considered equipped to recognize and properly treat foot-ills unless familiar with the causes which lead up to foot lesions. To know them, scientifically, presumes a knowledge of anatomy, histology, physiology, bacteriology, chemistry, pathology, surgery, dermatology and neurology. To intelligently treat these various abnormalities requires the additional knowledge which comes from the study of materia medica, therapeutics and chiropodial orthopedics. Therefore it is proper that podiatry should be taught as a branch of medicine, scientifically, comprehensively and ethically. Do you know that up to the time of the establishment of this school, there was no place in the world where the poor could go to have their minor foot-ills treated? Now the clinic of the school treats from fifty to one hundred of these foot-sore people nightly. What else are we doing to aid the public and the government? We are urging employers of labor to appoint orthopedists or chiropodists to look out for the feet of their employees, because statisticians tell us that the efficiency of the foot sore is impaired at least twenty-five per cent. Fire departments, police departments, factory heads, department stores. surface railroad corporations and other large employers of labor, recognizing the situation, are securing the services of chiropodists both to relieve the suffering of their employees and to raise the standard of efficiency of their help. German authorities state that sixty per cent. of the school children have impaired feet and that ninety per cent. of this sixty per cent. grow to manhood and womanhood without these defects being corrected. We are planning to examine these children in schools and elsewhere and of ultimately attempting to treat and restore their feet to a normal condition so that they may not grow up to be cripples. The present war in Europe has verified statements previously made that battles have been lost and won because of the non-care or care of the feet of the soldiery. We are in touch with the surgeon generals of the Army and Navy, and Congress will be asked next year to make an appropriation so that orthopedic and podiatric supervision may obtain in those two arms of the government. Whatever little or much I may have done in the cause of medical education is a pleasant contemplation, but no part of my activities pleases me more, as time goes on, than the work I have done and am planning in the attempt to accord to the public the medical service in the scientific treatment of foot-ills from which it has so long been deprived.

Members of the Alumni Association: I have not had the time to prepare a studied address such as the occasion and as precedent prescribes. I apologize for my short-comings in this situation. Perhaps I have furnished you with some food for thought along the lines of the civic duties of the physician. If so, and fruit is borne of this disjointed effort, rendered more difficult and taxing by reason of the jolting of the New York Central cars as I am pencilling these lines, I will have been amply repaid and perhaps may be forgiven for a seeming breach of the proprieties as between the association and one whom you have honored by making him President of your organization. In conclusion I wish to thank Dr. Vander Veer for his efficient management of the affairs of the association. His help has been invaluable to me and I am sure, to the other officers of our body.

Gentlemen of the Graduating Class: To-day you automatically become members of our organization and as its President, it becomes mine to welcome you to us. You are in an envied position as compared with us, who though trained in the same environment, had far less of the knowledge of medicine presented to us than has been imparted to you. Everything that is new and valuable in alleviating suffering, in preventing and in curing disease and in otherwise fitting you for your careers, has been available to you through the approved methods installed in our revived Alma Mater. You must now take the initiative in exploiting the newer truths in medicine which are continuously crowding upon us. You will learn, if you have not already acquired that knowledge, that the laboratory and the bedside must be kept in close juxtaposition. The labors in the one must be made to dovetail with the experiences of the other. You are well equipped to serve your fellow-men. Let me advise you to bear in mind that your student days have not ended with the granting of the M. D. degree. Although great advances have been made in medicine, in recent years, they will seem as but midget steps compared with the giant strides that are to come. Some of the seeming truths of to-day, will be mistakes to-morrow. Be prepared with open mind to alter your viewpoint if new facts warrant. Concerning the things in doubt, be an agnostic rather than an inconoclast. As worthy a practitioner of medicine as ever ministered to suffering humankind (my revered father) advised me long years ago not to dispute about matters concerning which the full facts were not known but rather to say when asked and in doubt: "I do not know." I pass this advice along to you. If you adopt it, it will save you many a bootless argument and will keep your mind clear to recognize the truth when the truth is in evidence. Join us to-day in fealty to our Alma Mater. Harbor no evil thought of those who are faithfully and earnestly and honestly working to advance the cause of humanity through the medium of our profession of which you are pullulating members. List not to slander of those who serve well, even though mistakenly, for he who wittingly assassinates the character of a good man, himself commits moral hari-kari. In striving for success bear in mind the words of Henry Victor Morgan:

I hold *that* man alone succeeds
Whose life is crowned by noble deeds,
Who cares not for the world's applause
But scorns vain custom's outgrown laws;
Who feels not dwarfed by nature's show,
But deep within himself doth know
That conscious man is greater far
Than ocean, land, or distant star;
Who does not count his wealth by gold,
His worth by office he may hold,
But feels himself, as man alone,
As good as King upon a throne;
Who, battling 'gainst each seeming wrong,
Can meet disaster with a song,
Feel sure of victory in defeat,
And rise refreshed the foe to meet;
Who only lives the world to bless,
Can never fail—he *is* success.

As President Lewi concluded, Dr. Andrew MacFarlane moved the thanks of the Association to him for his beautiful and appropriate address, incorporating in his motion a request for the manuscript, that it might be published in the ALBANY MEDICAL ANNALS as part of the transactions of the Association. Ex-

President Lown put the motion, which was unanimously adopted, and President Lewi resumed the chair.

President Lewi announced that the invitation to the Faculty of the College to appear before the Association by one of its members had been accepted, and Dr. Wesley Manning Baldwin, Professor of Anatomy, was introduced, and delivered the following address:

Professor Baldwin's Address.

Mr. President, Alumni of the Albany Medical College:

The acceptance of an invitation to speak before you was a great pleasure, to be sure, but not entirely unalloyed with regret. Even the innate modesty of an anatomist shrinks from inflicting upon an unsuspecting audience, gathered upon such an occasion and with such a worthy purpose as this, an address upon a trite and lifeless subject like anatomy. But this is the season of incongruities and in this fact there is at least a morsel of comfort. The season of commencements which mark completions and of reunions which seldom completely reunite, of graduates surfeited with knowledge and supersaturated with a consciousness of the same, and of orators laboring under the symptomatology of loquacity and hollowness. The anatomist, accordingly, finds his place. Again,—with each recurrence of this season of the year, the educational craft must put to port and dress ship for inspection. To you who have served your apprenticeship in this venerable vessel is given a delight which must be yours alone, to view again the old craft from which, at the beginning of your medical careers, you caught the first faint glimmerings on the distant horizon of medicine of those high ideals and standards by which in your later and more mature years you have successfully steered your course. And if, in the interval of years, it be found necessary to standardize the intellectual compass, so to speak, by which a science has been guided, with what greater interest will you, at this particular time, inquire into the conditions bringing about such readjustments, test the soundness of the new mental framework, scrutinize her chart, and examine her officers? It is my business to present to you the subject of anatomy; indicating, so far as is possible in the brief time at my disposal, the principles upon which the development of the department is based that you may judge of their soundness, and to point out the ideals towards which we are moving that you may conclude as to their propriety.

Among the many valuable contributions to science, applicable to medicine, given by physicists there are two, at least, which are of fundamental significance and of wide application. We learn from them of the *unreality of the present* and of the *untenability of the middle ground.* The present, as an actuality expressed by a tense, does not exist. Man's conceptions are limited either to the future or to the past. The swiftness of the transient present outspeeds the impulse rate of his nervous being. What is, resolves itself into what was, before we are done with it. Why then, considering the swiftness and intangibility of what seems to be, should we concern ourselves with the present? Our activities, thoughts, and accomplishments are really in the future tense. We merely read indelible records of them in the past. Again, the same class of scientists has upset our equilibrium by robbing us of that other mental heirloom, the middle ground. Forces are resolvable into either negative or positive. No force is neutral. A living organization possesses life or the opposite of it, death, but cannot be a hybrid with regard to these two qualities. Furthermore, two forces are discernible in living organizations, one of growth and the other of retrogression; one upbuilding and the other breaking down; one autolytic, the other catalytic; one synthetic, the other analytic. No living organized structure remains or can remain in a fixed and steadily maintained neutrality. It must yield either to the positive or to the negative forces acting upon it. These principles are significant and we can do no better than to ponder them deeply.

We may observe first that they support and stabilize our judgments. For while it may be a difficult matter in any given instance to gather positive evidence that a science is retrogressing, it may be comparatively easy to demonstrate that it is not growing, and from this negative evidence we may be doubly positive that it must be receding. It cannot be stationary, or conservative, as we say, since these principles of physics are authoritative upon the matter. In brief, if we find it difficult or impossible to prove through positive evidence that a science is advancing, then with proportionate certainty we may be sure that it is receding. To make use of an ultra-modern expression, we are now in a fair way to apply "the acid test" to our medical sciences.

I venture that the history of medicine is the strongest guarantee of the actuality of positive forces broadening its scope, and forecasting its future. Such reasoning as a man was sick, we gave him medicine, he got well, consequently our medicine cured him, has long since been cast overboard. In the past, too, we have heard much of the art and of the science of medicine. But tracing down through the years of medical evolution we notice that that one aspect, the art of medicine, has been rendered much less conspicuous whereas the science of it has taken new life.

"'Twas in his carriage the sublime,
Sir Richard Blackmore used to rhyme,
And if the wits don't do him wrong,
'Twixt death and epics passed his time.
Scribbling and killing, all day long."

Unfortunately, Thomas Moore has left us in some uncertainty as to which was the art and which the science.

Such a transformation in the character of medicine was not unforeseen by keen observers of other years. Huxley maintained "there can be no doubt that the future of pathology and of therapeutics and, therefore, of practical medicine depends upon the extent to which those who keep up with these subjects are trained in the methods and impregnated with the fundamental truths of biology." Virchow conceived of pathology, the real basis of medicine and surgery, not merely as a descriptive science but as an experimental science whose fundamental laws were the laws of biology. Theirs was not the only powerful influence shaping the development of the science in this direction during the last half of the last century. As a result, in this late day of medical enlightenment we shall scarcely be able, especially in view of the extensive experimentation devised in testing the foundation of both sciences, to reason away the biological principles of either medicine or surgery. The one is as the other, experimental biology or morphology. The validity of the same biological laws of behavior and reaction such as control the lower animals are demonstrable in our experimentation upon the most highly specialized organism, man.

And now, turning our attention to anatomy, in a preliminary comparison of its status now with its condition twenty or thirty years ago, we have no difficulty in perceiving the existence of a vast difference between these two periods. This may be accepted as preliminary evidence of a healthful and vigorous growth of the science. In more strictly scientific countries where its position as a biological science has long been granted, its growth has brought it closer in interest to the two mutually dependent sciences of medicine and surgery. So vigorous has been the development of this science under such conditions that only those who are specifically interested in the subject have been able to keep track of it through its various subdivisions. At the risk of exhausting your patience I have decided to quote the list of the subdivisions of the present day science as mentioned in the report of the sub-committee on Anatomy to the Council on Medical Education of the American Medical Association for April 1909.

Anatomy comprises;—

1. Comparative Anatomy,
2. Human and Comparative Histology, including special provision for courses for dental students and for students of anthropology and paleontology,
3. Dissection and Systematic Human Anatomy,
4. Topographical Anatomy,
5. Anatomy as applied in Medicine, Surgery and the Specialties,
6. Microscopic Anatomy and Histology, Human and Comparative,
7. Embryology, Human, Comparative and Experimental,
8. Neurology, Human, Comparative, and Experimental,

9. Anatomical Technique,
    - a. Gross, including injections, corrosions, etc.,
    - b. General micro-technique,
    - c. Special technique, blood, etc.,
    - d. Illustrative work, including drawings, reconstruction methods, etc.,
10. Investigation of anatomical problems, including methods of looking up the literature on the subject,
11. Seminars in Anatomy,
12. History of the Development of the Anatomical Sciences,
13. Artistic Anatomy.

Such is the list. A formidable one you will say, yet the committee forgot to mention that one, most essential to students of medicine and surgery, "living anatomy." For surely students who are to become practitioners of medicine and "who are made to feel in their courses that they are studying an intricate and delicate mechanism which subsequently they will be called upon to put right when it gets out of gear," are interested more in the makeup of the living body and not so much with the structure of the cadaver with which later, as conservators of life, none is supposed to deal.

This almost encyclopedic scope of the science prohibits a thorough mastery in a lifetime save in the instance of a few men of training. The average anatomist himself does well if he restricts his scientific efforts to some branch of it after he has mastered the principles of it and familiarized himself with their main facts. "Folly it is then to expect students after a year and a half of college work to acquire any more than a superficial knowledge of it, but they can in that short time learn the methods of the science, appreciate the manner in which it is growing and understand the relation and significance of it to the broader field of general medicine." Hence, there must be delegated to the anatomist a selective function the exercise of which must always be controlled by that fact to which Billroth has called our attention, that more than ninety per cent. of our students are to become practitioners of scientific medicine. But on the other hand, we must not lose sight of the vital fact that one most essential purpose of the teaching of the science would be lost if no attention were given to the development of teachers or investigators.

It is conceded that the training received by a student pursuing the medical course is somewhat greater than the sum total of that training which he gets from each of the closely associated and logically sequential subdivisions of medicine, as anatomy, physiology, pathology, medicine, and surgery. In other words, the scientific training which a student receives is a factor to be reckoned with independent of the special knowledge acquired. The possibility of a repetition or reutilization of technique acquired in a previous course prompts the student, with the confidence arising from a mastery thus attained, to independently map out his own line of attack on the newly approached science and at the same time enables him to delve more deeply into its foundations. This very repetition is suggestive to his mind of whole vistas of speculation of vital importance in the field of medical philosophy, a thing not possible in the study of those sciences whose mutual relationships are underemphasized. The preparation of this attitude of mind begins necessarily with anatomy, for the attitude, technique, power of observation, and method of thought acquired during the first few months of the medical curriculum, while they are part and parcel of the training purpose of anatomy, are not of restricted application to this science alone. When properly inculcated the greatest value arising from their mastery should be held during the latter clinical and practical years. We may even go so far as to contend that the technique of anatomy is identical with the technique of the later years because of the common scientific foundation of these closely related medical sciences.

The concentration method of instruction now employed at Albany requires no apology excepting that it is really German in origin. Submitted to a half-century of testing and not found wanting, its demonstration appeals irresistibly to our physical senses when our own experience in the matter is unattended to. The theorem that one can learn a thing well by doing one thing at a time is based upon personal experience. Children, of course, cannot fix their minds upon a certain set of ideas without the rapid intervention of fatigue. Mature students, however, can maintain a certain concentration of mind over a definite period of time. The anatomists, physiologists, and pathologists, the world over, have never really accomplished anything by any other method, yet they have until comparatively recently, in this country, most relentlessly insisted upon the dissipation of students' energy over a large field of subjects. Their hypocrisy becomes most apparent when we see them thus insisting upon a system which they themselves have not and would not employ in their own work.

The teaching of anatomy is, accordingly, contained in the first term of the year, the succeeding term being left free to the teaching staff for research work. And, parenthetically, permit us to remark, by this research work is not meant the reutilization of another's technical methods nor the rehash of another's results. It will be well for us to pause a moment to consider the significance of this arrangement. At the very first, we must observe that this feature of the arrangement of courses which enables the department staff to devote to investigation so much continuous time, that most essential of all factors for real creative research work, must necessarily in the long run impress a definite character not alone upon the department but upon the institution as a whole. From the multitudinous methods of testing and of experimentation known in the fields of experimental biology and embryology, we shall be given the opportunity to apply to the human species the best of them in the exercise of those highest prerogatives, the best interests of medicine, and the lasting benefit of mankind. This is simply the process now in vogue in our best research institutions. For what good in medicine exists there at the present day that has not emanated from these two fields, biology and experimental morphology? With such provisions the local or communistic character of the department is bound to be washed out and replaced by a broader or nationalistic conception.

With such an arrangement, moreover, there is permitted the development of the highest type of teacher, one who takes not merely a passive interest in his science, but one who contributes to the establishment and enlargement of it. That such a plan has been successful is to-day a settled question. For one's own conviction on the matter, but let him compare the average teacher in a good, productive, medical school of to-day with the average teacher in a good, teaching department of any university, to say nothing of the differences in the quality of the students produced under such conditions.

John Hunter had expressed himself that the only way to learn anatomy was "by dissection, and dissection, and dissection." Leading anatomists both here and abroad have been asked where they learned their anatomy. Invariably, their answer was "in the dissecting room." Notwithstanding, the lecture system has its minority of advocates even at the present day, yet it is a significant fact that not one of its advocates would use that method if he were to learn anatomy to-day. The general trend of progress is away from the rhetorical, formal, lecture system. The student wants methods not results. He wants to see and feel for himself and to draw his own conclusions. In other words, he wants to get his information first-handed. He wants to learn how to observe and how to think, and not what to learn and what to think. Goethe, by no means a mediocre anatomist, voiced this same sentiment. Herein lies the essential difference between the method of yesterday and the method of to-day in anatomy. Upon these principles a course in anatomy at Albany is being conducted. "Instruction in anatomy is obtained by continued self-instruction under guidance and not through numerous comprehensive and elegant lectures."

In contrast to the complexity of the science, as I have previously mentioned, the teaching of it is simple and elementary. We teach but these two things; how to observe and how to think. Most students, we may say, "have entered the dissecting room with an utter lack of independent power of observation, of examination and of description and yet these three qualities are absolutely necessary for the man who is to engage successfully in the practice of medicine." Students learn first how to study systematically and thoroughly, and to be clean and artistic in their work in the dissecting room. How much better is this for them than if at the outset of their career they become satisfied with superficial observation, with irregular activity, and with uncleanliness? The habits formed in the anatomical department have their effect upon the later life of the physician. Many times the question is asked, "Why spend so much time making a careful and beautiful dissection? Is it not time wasted to work out the finer branches of the nerves and blood vessels?" The importance of work on the delicate structures lies not always so much in the actual knowledge, as in the acquisition of the habit of thoroughness of observation and investigation. "The medical student who in the dissecting room works out only the main trunks of the vessels and nerves or only the structures which at the moment seem to the physicians and surgeons of the greatest practical importance is likely as a clinician to be satisfied with the observation of the more superficial symptoms, to the overlooking of more significant but less pronounced symptoms and more obscure physical signs."

Each student receives, on the first day of the course in gross anatomy, a box of bones of the human skeleton and is assigned to one-half of a cadaver. Dissection begins with the first hour of the course. All formality is dispensed with. The subject is approached directly. After the wrappings on the part. which he is to work upon. are removed the student proceeds to scrutinize its general shape, size, position, color, surface contour, etc., making mental note of the salient features, irregularities, depressions, grooves, etc.

He next palpates the entire region, prodding his fingers into the recesses and hollows and noting the differences in resistance encountered in the various regions. Reference to the skeleton. accessible to him always in the dissecting room, makes intelligible the resistance which he has encountered and helps to give him an X-ray view of the part with the bony points in proper relative position subjacent to the skin. Thus is the method of physical examination and observation begun by him, to be practiced under guidance during the remaining years of his medical course. Next, he observes the skin, noting its varied character in different parts of the body and the peculiarities of its appendages. When the limits of his normal eyesight are reached in this quest for first-hand knowledge, a small hand-magnifier is furnished to him and his investigation begins anew in the enlarged field now made accessible. Finally. he is shown, in the dissecting room, specimens of skin under the binocular microscope and, in addition, sectioned and stained specimens under the high powers of the compound microscope.

Next he removes the skin and finds forthwith a new field for his ever-increasing interest and attention, in the subcutaneous tissue with its arteries, veins, nerves, and lymphatics. Here again his inquiry begins with the naked eye and proceeds to the use of the hand-magnifier, binocular, and compound microscope after the limits of capacity of each have been reached. In this way the study of each of the various systems of the body and of their tissues is conducted; first carried to the limits of his natural means and then beyond by the use of every optical means known to the modern, scientific, anatomical laboratory. As a result he has acquired through his own efforts a comprehensive and clear, composite, mental grasp of the nature and intricate structure, both macroscopic and microscopic, of the several structures encountered. Measuring tapes, calipers, balances, in addition, all aid in furnishing the student with complete information on the subject. A drawing board mounted on a stand at the level of the dissecting table, with paper, etc., is furnished to him as an incentive to the taking of notes or the making of rough sketches and the accurate measuring and tabulation of parts at different stages of his study. Modeling clay is furnished to him and the general principles of its use pointed out in order to enable him to train himself in the reproduction of anatomical structures in the three planes of space. The anatomical terms applied to the structures encountered during the day's work are furnished by his guidebooks, and he is encouraged to read complete descriptions of these structures in his textbook during the succeeding evening.

Should he begin his dissection with the pectoral regions, he is instructed to study the dried clavicle of the skeleton in his bone box before the following day, and, then, after the study of the soft parts has been completed and the muscles and ligaments have been removed, but with the periosteum with its muscular and ligamentous attachments still intact, the fresh bone serves again as an object of study reinforcing the information gained from considerations of the dried skeleton. Coincident with the macroscopic and microscopic examination of anatomical structures, the instructor explains and demonstrates the salient, developmental points of these parts pointing out the interrelation and inseparability of structure and function. By this means, the general laws of function which determine all organic structure are brought to the student's attention, and he is enabled to conceive of the inevitable character of the anatomical organization. Thus he is gradually induced to think anatomically and biologically, and is prepared to reason out for himself the why and wherefore of the structural features of organization as he encounters them. "This makes him independent of his fellows, removes whatever of perfunctory nature of his work might, at any time, appear and transforms the body upon which he is working from a monotonous and somewhat arduous task to be performed into a vital problem to be solved." Whenever extraordinary structures or tissues are encountered, the services of the histological technician are placed at the service of the students, the tissue is sectioned and stained, studied under the high powers of the microscope and, after a conference with the instructor, a diagnosis reached as to its character.

Simultaneous with the study of the abdominal viscera, the different steps in the development of these organs are demonstrated in the three planes of space by means of models and the liberal use of modeling clay. The general embryological laws controlling the postural changes and morphological variations of the several systems are thus pointed out. Having once grasped the significance of these developmental steps and the interrelation of all developmental processes of the body to each other, the student is prepared with an understanding knowledge for what irregularity of shape, size, or position the body may present. Carried still further and by the same process, the significance of developmental defects and of malformations becomes as an open book. By this most essential correlation of the facts of embryology and of gross anatomy not only do these two subdivisions of the science fuse into one to the student, but the way is opened at the same time and preparation made for the larger aspect of this subject in pathology. The use of outline, skeleton charts on which the different organs may be sketched in proper position and the muscular and ligamentous attachments to bones properly placed, together with the study of frozen cross-sections of the body, all serve as valuable adjuncts in the acquisition of a stereoscopic view of the body. Coincident with this work in the dissecting room and in order that the aim of the teaching may not fail of its true object, a living model is presented before the class at stated intervals, when, under guidance, the student is permitted to enlarge upon his experience gained through inspection and palpation of the dead body by an intimate study of the living body. He is taught to transfer to the living what he has observed in the dead and "to cultivate a faculty of visual penetration beyond the depths reached by his fingers." In this feature we see, again, the acquisition of a method of study of paramount significance to him in his later work during the medical curriculum.

Formal recitations, so-called, are not held beyond a few serving as introductory to the method of anatomy at the beginning of the term. When once that fundamental of all education has been inculcated in the mind that knowledge upon a subject consists not merely in knowing the subject but in knowing that we know it, recitations become superfluous and a bore. Good, enthusiastic students request to be excused from them. Only the indolent, the frivolous, and the stupid cry to be stimulated by them. The up-to-date physicians and surgeons, who graduated decades ago when medical education was not in a condition of high tide, have kept abreast of medical progress in their particular fields by no series of lectures or quizzes. Hence, if the student will not get his information first-handed through his own efforts under the guidance of the teacher no degree of educational pressure will force it through the crassness of his pericranium. In brief, it is our set purpose to place students in the same intellectual environment in which they will find themselves after graduation; to cultivate the habit of carefulness and accuracy in thought, and the spirit of inquiry and investigation in their work, since we believe with such an equipment such students stand in the best way for the pursuit of their profession, and the advancement of the science. It must at least be granted that such qualifications are incompatible with the practice of a trade.

As stated above, courses must be modified to meet the needs of the particular institution. Our entering students are mere boys. Towards these a concession must be made. Two or three formal quizzes upon bones are conducted by the head of the department during the first three weeks of the course. At such times the manner and method of systematic study of the dried bones is pointed out. Then volunteers are called for for the remaining quizzes of the series, one a week throughout the term. No trouble is encountered in obtaining these quiz masters. Two different ones officiate at each successive quiz and, in the presence of a teacher, conduct the quizzes during the remainder of the term. Later in the course other hours of the week are set aside for a series of similarly conducted and parallel quizzes on the soft parts of the body. The students enter most enthusiastically and seriously into this work with an absolute disregard of time. The most good accruing from the system is experienced by the quiz masters, however, who learn thereby valuable lessons in accuracy of knowledge and in independence and stability of mental activity. Nor is there any antagonism upon the part of the students towards being quizzed by their own class mates. Attendance upon these quizzes is made entirely optional and, as I have pointed out, the quiz masters are volunteers. We consider that such a concession is temporarily made, however, for with more mature entering students, and certainly in the third and fourth years, such mental drilling becomes superfluous and unnecessary.

As is to be seen from the foregoing, the student gains access to the sciences of microscopic anatomy and of embryology during the time of his work in the dissecting room and without the realization that he has passed from the domain of one science to that of another. We are very careful not to point out this transfer to him. He is led to believe, by the method so used, that no barriers are present to him in his search for knowledge, even should such exist in the tentative subdivisions established by scientists. To him the vital fact is uppermost, that complete knowledge upon any subject or a satisfactory solution of any problem can be attained only after we have exhausted the use of every known physical complement to our natural senses. That the solution of a problem may lead through fields physiological, chemical, pathological, or bacteriological has no weight in the ultimate purpose of his investigation.

The course in general histology begins with the study of the unstained cell, first considered in the living condition and then stained vitally, dissociated, and, finally, fixed, stained and mounted. It is first studied with the naked eye then under the dissecting magnifier and, lastly, by means of the high-power, compound microscope. Similarly, the cell in relation to other cells is taken up and the way thus prepared to the study of tissues and organs of the body. In both courses, embryology and microscopic anatomy, the same methods of teaching are employed as in gross anatomy. The source of information, the specimen, is approached directly without formality and the function of "the textbook relegated to a much subordinate position as a work of reference of much inferior and often of questionable value." The general principles of histogenesis and of organogenesis are gained necessarily through the study of the earlier developmental stages in the pig and in the chick, since such stages are lacking to us and difficult to obtain in the human specimen. The consideration of the general subject matter of this science and of histology is synchronized, so far as is possible, with the work in gross anatomy. As has been pointed out, this adjustment of the courses makes it possible for the student to gain a much more extended knowledge and a much more comprehensive grasp of the structural units of the human body, since he learns at one and the same time all that is to be had of the macroscopic, microscopic, and developmental features of the several tissues and organs as he encounters them. At no time is there any hesitancy on the part of the instructor to point out to the student whatever relations the subject matter under consideration may suggest, whether they be physiological, chemical, or clinical. The morphological values of the science are not thereby impaired, but as is true in gross anatomy particularly, rendered of greater significant value to the student. Here again the narrow limits of that particular scientific field become washed out and inconspicuous to the student view.

In both histology and in embryology a loan collection of slides is available for student use. Each student has access to a complete set of stained and mounted specimens of nearly all of the tissues and organs of the human body and embryo. Upwards of 6,000 slides have been prepared since the institution of this course but much still remains to be done. To safeguard the student from what might ensue as a distinct loss to him of valuable technique, however, opportunity and instruction are afforded to the more ambitious and industrious in the simpler processes of fixation, embedding, sectioning, staining and mounting of tissues.

And now, by virtue of your indulgent patience and my unlimited energy, we have finally come to the last feature. With the system of instruction in the anatomical sciences founded upon the principles such as are outlined above, roll books with attendance or deportment marks become relegated to the scrap heap. No processes of stimulation or incitement are required by the properly-attituded students but rather checks judiciously and forbearingly applied to their virile vigor and enthusiasm. Since no efforts are wasted upon helpless and inferior men and no desire expressed by the teaching staff to drive men into medicine contrary to their own inclinations, as the term wears along the class undergoes gradually a process of self-segregation which reacts advantageously to both classes which result. Every opportunity is given to the zealous and eager student to satiate his appetite for knowledge irrespective of what may be a shallower or mediocre capacity of his neighbors, and, at the same time, nothing is permitted to disturb the sweet slumber of the sluggard save the inevitably cruel examination at the end.

The thanks of the Association were tendered Dr. Baldwin for his scholarly address, and a copy was requested for publication in the ALBANY MEDICAL ANNALS.

The report of the Historian of the Association, Dr. Bedell, was then presented and ordered entered on the minutes.

REPORT OF THE HISTORIAN, ARTHUR J. BEDELL, M. D.

Mr. President and Gentlemen: Your historian, at this forty-third annual meeting of the Alumni Association of the Albany Medical College, has nothing of unusual interest to report. Perhaps the most noteworthy fact that should be brought to the attention of the Alumni Association is the statement in this morning's paper that $41,000 has been given to the college this year.

Fifty-one men are taken into our Association this morning. Again we welcome them and urge them to keep us informed as to their medical progress.

NECROLOGY.

During the past year thirty of our Alumni have died:

Dr. DAVID F. ALSDORF ('55), Guthrie, Okla., February 15, 1916, aged 83.

Dr. IANTHUS G. JOHNSON ('55), Greenfield Centre, N. Y., May 31, 1915.

Dr. CHARLES B. FRY ('61), Mattoon, Illinois, March 2, 1915.

Dr. ALFRED M. YOUNG ('62), Salem, N. Y., February 15, 1916, aged 79.

Dr. GUY HOLBROOK ('66), Boston, Mass., January 1, 1916, aged 70.

Dr. GEORGE O. WILLIAMS ('66), Greene, N. Y., February 24, 1916, aged 72.

Dr. JAMES D. BRAGG ('67), Bridgeport, Conn., July 23, 1915.

Dr. JOHN M. SHIELDS ('68), Jemez Springs, New Mexico, May 23, 1915, aged 74.

Dr. EDWARD A. CARPENTER ('69), Cambridge, Mass., June 24, 1915, aged 68.

Dr. CHARLES M. LEFLER ('70), Gloversville, N. Y., October 6, 1915.

Dr. THOMAS H. MANN ('70), Bolton, Conn., March 2, 1916.

Dr. JAY J. MILLER ('71), Schenectady, N. Y.

Dr. CHARLES K. FRAZIER ('73), Cobleskill, N. Y., October 21, 1915, aged 65.

Dr. DAVID H. LOWN ('77), Troy Hospital, April 15, 1916.

Dr. CLINTON B. HERRICK ('80), Sharpes, Fla., March 23, 1915, aged 55.

Dr. WARREN P. PALMER ('80), Brooklyn, N. Y., January 7, 1916, aged 58.

Dr. EDWARD L. CRANDALL ('81), Troy, N. Y., March 6, 1916, aged 59.

Dr. IRA HARRIS ('81), Tripoli, Syria, November 25, 1915, aged 69.

Dr. GEORGE P. RIDER ('88), Denver, Colo., February 11, 1916, aged 51.

Dr. EUGENE J. GALLAGHER ('92), Yonkers, N. Y., at New York, December 3, 1915, aged 46.

Dr. JAMES M. MOORE ('94), Albany, N. Y., March 21, 1916, aged 43.

Dr. Charles E. Weidman ('95), Cresbard, S. D., April 21, 1916, aged 45.

Dr. Frank A. Hennessy, California, July 5, 1915.

Dr. Sanford Bassler ('96), West Berne, N. Y., January 13, 1916, aged 51.

Dr. Calvin Emerick ('97), Glasco, N. Y., January 26, 1916.

Dr. Frederic F. Burtis ('98), S. S. Advance, September 6, 1915, aged 38.

Dr. Thomas D. Collins ('98), Ballston Spa, N. Y., April 5, 1916.

Dr. Augustus C. Post ('11), Catskill, N. Y., January 2, 1916.

Dr. Axel F. Swanson ('13), Southampton, Mass., March 20, 1916, aged 24.

Dr. Leonard K. Van Dyck ('15), Brooklyn, December 30, 1916, aged 25.

Fairport, N. Y., *June* 5, 1916.

To the Alumni Association of Albany Medical College: I extend my hearty greeting and wish you a joyous occasion, although it is hard to feel in good cheer with the appalling world tragedy and scourge of war with its pagan deeds, desolating so many fair lands and sacrificing the best blood of unnumbered sons. These thoughts lead me to recall scenes that I witnessed on many battlefields during our Civil War, as a brigade surgeon in the army of the Cumberland. As long as the world continues to be governed as it ever has been—in a large degree—by physical force and lust for power and gold, we shall need trained battalions. Still I am a firm believer that in the fullness of time, that the ethical teachings of the Prince of Peace will prevail throughout all lands and that the earth will learn the arts of war no more. In place of the laurel wreath there will be a garland of fadeless white immortelles to crown the apostle of peace.

I have lived to witness many great changes in many lines aside from our profession. I had accumulated a comfortable fortune from professional income and careful investments, when the political upheaval and financial cyclone swept over the country following '92, and left me nothing but wreckage. But a cheerful heart and a buoyant proud spirit piloted me through the breakers and across the bar to the port of joy and contentment.

Fraternally,

Samuel Francis Hance, Class '54, age 91.

HISTORY OF THE CLASS OF 1856.

The Class of 1856 consisted of sixty-three members. Our records show that thirty-three have died.

Dr. Edward B. Root's last known address was Painesville, Ohio. No response to inquiries.

Dr. Arnold Strothotte's last known address was St. Louis, Mo. No response to inquiries.

CLASS OF 1856.

The members of the Class of 1856 were:
W. E. Allen, Scranton, Pa., died August 20, 1903.
William Arthur.
Charles E. Bates.
George M. Beakes, Bloomingburgh, N. Y., died June 15, 1900.
S. T. Beardslee, Armada, Mich., died 1898.
Isaac S. Becker, Altamont, died January 13, 1914.
Henry J. Bennett.
Truman S. Brinkerhoff, died September 3, 1888.
Alfred H. Brundage, Penia, Ohio, died December 10, 1903.
John Cipperly, Middle Falls, N. Y., died February 7, 1910.
Jerome R. Collins.
Jeremiah A. Cross, Newark, N. J., died March 30, 1881.
Lemuel Cross, Cobleskill, N. Y., died April 26, 1909, aged 75.
A. C. Dedrick, Rhode Island, died April 16, 1889.
H. H. DuBois, Watertown, Conn., died April 11, 1891.
Henry M. Edsall, Wortsborough, N. Y., died 1876.
Obadiah T. Ellison, Condersport, Pa., died April 15, 1908.
E. Lee Ensign, Erieville, N. Y., died.
John Flickinger, Trumansburgh, N. Y., died June 22, 1899.
Edward J. Frisselle.
P. J. Galloway.
Benjamin P. Grinnel.
J. J. Harris.
John B. Hartwell, Lockport, N. Y., died June 23, 1902.
L. B. Healey, died February 1880.
Charles E. Heath, died Lee, Mass., October 5, 1887, aged 57.
Lewis W. Hodgkins, Ellsworth, Maine, died June 11, 1907.
Harvey A. Horton, died.
DeLos W. Hunt.
Urban Jansen.
Hammond Johnson.
James A. Johnson.
J. Russell Little.
H. W. Lobdell.
Thomas Lockrow
John MacAllister.
Henry McKennan.
Alvarado Middleditch, Pasadena, Cal., died April 26, 1909, aged 80.
John N. Miller, Poughkeepsie, N. Y., died.
K. V. R. Montford, Newburgh, N. Y., died December 18, 1900.
Charles M. Mosher, Graysville, N. Y., died June 18, 1894.
Wolcott W. Paige.
Rufus Palmer.
Castanus B. Park, Des Moines, Iowa, died August 22, 1892.

P. Gould Parker.

C. M. Pierce, Washington, Florida, died October 11, 1878.

Samuel A. Richardson.

Charles A. Richardson, died Cortland, N. Y.

Aaron W. Riker, Fentonville, Michigan, died October 31, 1909, aged 78.

J. Henry Robinson, Southboro, Mass., died March 11, 1904.

Charles W. Robinson.

Edward B. Root, Painesville, Ohio.

Robert H. Sabin, West Troy, N. Y., died December 4, 1888, aged 56.

Arnold Strothotte, 2916 Morgan St., St. Louis, Mo.

George B. Todd, U. S. Navy, died.

John H. Van Buren.

Samuel D. VanScoy.

H. Van Tuyl.

Henry VanWert, Ramertown, N. Y., died February 10, 1898.

Jacob Vreeland.

Fleming Webster.

John P. Wheeler, died 1864.

George A. Wilkins.

HISTORY OF THE CLASS OF 1866.

The Class of 1866 consisted of fifty-two members. Our records show thirty-three have died.

Dr. James L. Allaben, Margaretville, N. Y., died June 11, 1890.

Dr. Russell G. Andrew, Navesink, N. J., died July 6, 1909.

Dr. Charles B. Barber, last known to be at Keesville, N. Y. No reply to inquiries.

Dr. Harvey W. Bell, Hatton, Miss., died February 1897.

Dr. Henry W. Boorn, Schenevus, N. Y., died November 8, 1910.

Dr. Henry W. Boynton, Toledo, Iowa, writes: "I was born at Boquet, Essex Co., N. Y., on March 18th, 1837. What education I had was in the common public schools and two terms in an academy in Essex, N. Y. I read medicine in Brooklyn, Iowa, under Dr. John Conaway, eight or nine months and then enlisted in August 1862, at Brooklyn, Iowa, for three years in the 28th Iowa Vol. Inf. and shortly after enlistment I was appointed hospital steward of the regiment and served as such for the three years until the close of the war of the rebellion after the three years of arduous service. I returned to my native place in New York State and resumed the study of medicine and two terms at the Albany Medical College and graduated from there on December 24th, 1866. I opened my first office for the practice of medicine and surgery in the spring of 1867 at LaPorte City, Black Hawk County, Iowa, where I practised medicine for about three or four years when for wider opportunities I moved to Toledo, Iowa, and practised until 1882 when I retired. I was a member of the Iowa State Medical Society, President of Iowa County Medical Society. Was United States Pensioner Examiner from 1872 to 1889, to 1894 and in 1898 for Iowa County, Iowa.

Dr. David S. Bradford, Janesville, Iowa. No response to inquiries.

Dr. William A. Brown died.

Dr. Arthur H. Burger, Ballston Spa, N. Y., died at Hudson Falls, N. Y., about 1906.

Dr. William G. Burnham. No record.

Dr. Ovid L. Butts, Broomeville, N. Y., died.

Dr. Henry A. Clark. No record.

Dr. Albert V. D. Collier, last known at Coxsackie, N. Y. No reply to inquiries.

Dr. Henry A. Crary, Knox, N. Y., died December 25, 1908.

Dr. William H. DeLong, Emporia, Fla., writes: "You must excuse me for not reviewing the past fifty years which have been rather void of any remarkable events. Am seventy-six years old, an invalid, am growing fine oranges and seeing a few patients. Greetings to my classmates if any are left and will be with them (in my mind)."

Dr. Edward J. Dickinson, Corydon, Iowa, died April 16, 1909.

Dr. Isaac Fowler. No record.

Dr. E. W. Gallup, Stamford, N. Y., writes: "Nothing of especial interest in my long period of fifty years of uninterrupted practice. I was born in Schoharie County, N. Y., 1840. Very soon after graduating I settled in Stamford, N. Y. (now a popular summer resort), often called the "Gem of the Catskills." Here I have plodded on, never having missed a day's practice because of illness. Am still in good health but sometimes shirk a little from the hardest work. Financially, I have been fairly prosperous. See no wolf at the door. Early in my practice I fixed upon three cardinal objects in life, viz. Home, Church and Profession. First, Home. In 1865 I was united in marriage with M. Jennie Rowley, we had only one child a son, who was for some years rector of an Episcopal church in Newark, N. J., a very popular preacher and lecturer, died fifteen years ago in early life. Wife died in 1911. Three years later I married Mrs. E. E. VanDyke, with whom I am quietly passing my evening time of life, together we are watching the gathering shadows of the coming night and anticipating the morning by-and-by. Second, Church. I have taken for a long period, great interest in my church (Presbyterian). Have served for forty consecutive years as an elder, trustee and treasurer. Have been impressed that the spiritual as well as the physical should have the best possible care. Third, Professional. In this regard I have already said enough. I have served as coroner, village president, etc., but this matters little."

Dr. Benjamin Gifford, Boston, Mass. No reply to inquiries.

Dr. Charles S. Grant, Saratoga Springs, N. Y., died February 6, 1899, aged 53.

Dr. Allen C. Grover, Port Henry, N. Y., died June 5, 1900.

Dr. Charles Hazeltine, Grand Rapids, Mich., died December 17, 1912.

Dr. Guy Holbrook, Colebrook, N. H., died January 1. 1916.

Dr. William H. Hull, died 1893.

Dr. Peter H. Hulst, Greenwich, N. Y., writes: "After graduation in 1866, I began practice at Schuylerville. In 1868 I removed to Greenwich where I have practised since. Have four children in active life, one of whom, a physician, is practising in Brooklyn. Am getting out of practice on account of age. At present am health officer of our village and medical examiner of the Metropolitan Life Insurance Company."

Dr. James L. Humphrey, died September 5, 1910.

Dr. Enoch E. Johnston, died.

Dr. John W. Johnston. No record.

Dr. Otho S. Knox, Waterloo, Iowa, died April 10, 1905.

Dr. Sylvester D. Lewis, Syracuse, N. Y., died June 16, 1906.

Dr. Edward S. May, last known to be at Washington, D. C. No response to inquiries.

Dr. James F. McKown, Albany, N. Y., died August 25, 1892.

Dr. Daniel Merville. No record.

Dr. Isaac T. Monroe, Granville, N. Y., died December 30, 1901.

Dr. James F. Murray, Gloversville, N. Y., died December 5, 1897.

Dr. Phil C. Neher, died March 1893.

Dr. Albert S. Newcomb, New York City, died March 1, 1915.

Dr. Daniel V. O'Leary, Albany, N. Y., died August 5, 1914.

Dr. Darius S. Orton, Northampton, N. Y., at the beginning of the Civil War enlisted in the 10th New York Cavalry. After a few months of service he entered Campbell Hospital, Washington, D. C., and continued service until 1864. During this time he attended lectures at the Georgetown University after which he attended the Eclectic School in Philadelphia. Graduated from Albany Medical College in 1866. Has practised at Northampton, N. Y., from then until November 1912, when he suffered an attack of cerebral thrombosis which has since prevented him from active practice.

Dr. George H. Overhault, Kenyon, Minn., writes: "It is fifty years since I graduated. I do not know where the boys are who graduated in that year. Dr. George Tilden of Omaha, Nebraska, graduated in 1867. He is still in Omaha and is the only one I have any knowledge of. I would like very much to be with you in June but the circumstances are such that I cannot well do so. I am now seventy-four years of age."

Dr. Clair S. Parkhill, Hornellsville, N. Y., died July 20, 1909.

Dr. Truman E. Parkman, Rock City Falls, N. Y., died October 24, 1904.

Dr. Henderson A. Phillips, died August 19, 1877.

Dr. Isaac E. Randall, West Bay City, Mich., died January 20, 1911, aged 66.

Dr. Thomas O. Reynolds, Kingston, N. Y., died December 12, 1913.

Dr. George W. Rossman, Ancram, N. Y., writes: "Was born in Columbia County, N. Y., in 1841, son of Dr. Peter P. Rossman and Caroline Benton Rossman. Received my preparatory education ——— Seminary and Hudson Academy; graduated from Hamilton College in 1863 and the Albany Medical College in 1866. In the early part of

1867. located at Ancram, N. Y., my native town and began the practice of medicine and surgery which I have successfully continued since. Without delay, I became a member of the Columbia County Medical Society, was soon chosen as the president and was later sent as delegate for three consecutive years to the New York State Medical Society of which I became a permanent member. In 1885, the County Society chose me as delegate to the National Medical Congress which convened at New Orleans, La. Was married to Frances N. Green, in 1870. We have one son, Clark G. Rossman, who is also a physician. Though zealous in educational matters and good government I have held myself aloof from the political arena and strife for public office and its emoluments. My chief ambition has been to maintain an honorable position in the foremost ranks of my profession."

Dr. GEORGE A. STOCKWELL, Detroit, Mich., died January 29, 1906.

Dr. URIAH J. SWAIN. No record.

Dr. ANTHONY P. TEN EYCK, Bloomingrove, N. Y., died February 4, 1893.

Dr. JOHN C. WHITE, Port Chester, N. Y. No response to inquiries.

Dr. GEORGE E. WILLIAMS, Greene, N. Y., died February 24, 1916.

Dr. CHARLES E. WHITBECK, Cohoes, N. Y., died May 13, 1909.

HISTORY OF THE CLASS OF 1886.

The Class of 1886 consisted of forty members. Our records show fourteen have died.

Dr. GEORGE H. BAKER, Long Branch, N. J., writes: "The receipt of yours of recent date was indeed a great pleasure I believe we all love to be remembered. You ask am I still alive and doing business. The former yes the latter just now not much as I will explain later. At the age of 62 I still have an abundance of hair over my head and the teeth with which Nature endowed me are still good and doing duty. You also ask for a synopsis of my past thirty years. Some task to give I tell you. but, I will try it as concisely as I can in brief. In the fall of 1887 I left Troy my native city and located for practice at Eatontown, N. J., a small village about four miles from the sea almost due west from Long Branch. Here I flung my business sign to the breeze and to the public. and remained there until the spring of 1892. During this time I made a good comfortable living that was about all. April 1892, seeking a larger field I moved to Long Branch. My strict attention to business and keeping my mouth shut I soon found business picking up nicely and so things went along until by 1900 I had a very good practice and still increasing so that in the next five years I had not only a good work among our resident people but had added many wealthy families who come here for the summer months from many of the large cities around as well, in fact from all over the country, so that I was able to save something and I bought for a home one of the best corner properties in the city, this in 1906, the house I still occupy.

These five years had for me several interesting events. One short, the only real vacation I ever had was a two months' cruise to the West Indies with one of my families in their private yacht. I became a member of the State, County and local medical societies, was appointed and served as member and three years as president of the Board of Health and was elected the first president of the newly organized Board of Trade and re-elected for five consecutive years. It was about this time I think that Prof. Vander Veer attended the New Jersey State Medical Society meeting held here and it was my privilege and pleasure to be able to do a little toward entertainment and by the way you may ask him some time on the quiet if he is fond of steamed clams. Outside of the medical societies I am not much of a lodge man. My only affiliation other than them is Masonic. We have ten lodges here. I have been master of both and high priest of the chapter. My work continued to increase, I had more than any one man should attempt but as you know I was always a strong, rugged fellow, and thinking there was no limit to my power of endurance I kept right at it, day and night, night and day, and that was my mistake. In July 1909, after being out all night with one of my colleagues in a bad labor case, I came home in the morning tired but well and happy, but, alas, I had gone too far. The limit was reached, I fell to the floor, apoplexy, and a resulting hemiplegia from which I am still suffering. This of course incapacitates or at least very much handicaps me for work and explains why I said I was doing but little at the present time. Nearly seven years costing me in loss of work thousands of dollars. However could I be all right to-morrow I could laugh at the financial loss, and would rejoicingly with plenty of grit and confidence start all over again. After so long a time I am not counting on much improvement. I have used all my savings and more trying everything suggested and everywhere including nine months of the hyperaemic or vacuum treatment of Bier, Germany. My wife, who was Miss Alice Rouseau of Troy, who enjoyed with me my prosperity, stands by me with unfaltering fidelity in my adversity. We have no children. Now my thoughts go back to my classmates, how I loved them, every member and that gang from Troy, do you recall them, Baker. Baynes, Freist, Gordinier, Lemon, McIntosh. Some bunch I tell you and others, playmates of my childhood, companion of my youth. Class friend and classmate in our college days, Dear Webster, it is said if we are true to ourselves we cannot possibly be false to others. Steve was true to himself, stricken down in the beginning of what gave evidence of a bright and useful career, died January 6, 1899. His life is sweet to remember. May the winds of heaven whisper hourly benediction o'er his grave.

"Kindly extend to each member of our class my hearty greeting and my regret at not being able to be with you. With a good wish for every alumnus of our dear old Alma Mater, I am."

Dr. Joseph E. Baynes. No record.

Dr. A. J. Blessing, Albany, N. Y., writes: "I am still among the living and practising in Albany and am anticipating being with my class on June 9, 1916. I hope all my living classmates will meet with us."

Dr. William P. Brierly, Albany, N. Y., died June 22, 1911.

Dr. Alfred L. Browne, Cornwall-on-Hudson, N. Y., died 1898.

Dr. W. B. Campbell, Edmeston, N. Y., writes: "In reply to your recent letter, I hope and expect to be present at the reunion June 9, 1916, and will be very glad to meet my former classmates. I am still able to be on the job much as the same as the past thirty years, perhaps ambition has abated to quite a degree, although I did more work last year than any former year.

"I settled at Garraltville, six miles from here and did a fairly good business. On account of school advantages and the opportunity of making a good trade came here fifteen years ago, and have had all I wanted to do most of the time. I think it is fair to say my practice has been a success and that I have in no way been a disgrace to the A. M. C. While not at all wealthy it is not necessary to worry about the future, but an idle life does not appeal to me as desirable, so am likely to continue in the work for some time, maybe only stopping at the end of the chapter. As you may remember I was married before taking up the study of medicine. One daughter came to us the year following graduation, no children since. She is a Cornell University graduate and now married to a preacher and we are grandma and grandpa twice removed. Hoping to see you all on June ninth."

Dr. Arthur S. Capron, Albany, N. Y., died April 22, 1913.

Dr. James Carr, New York City, died December 1905.

Dr. James A. Clyne, last known to be at Joliet, Ill. No response to inquiries.

Dr. Eugene H. Coons, Gloversville, N. Y. No reply to inquiries.

John A. Cutter, New York City: "Left Albany two a. m. March 4, 1886, and two days later filed my diploma at county clerk's office. Have been engaged in practice in New York City since then except for six months in Kentucky in 1888, on some special work. While I have specialized in the management of chronic cases of disease, and believe it to be the coming field in medicine, requiring earnest, faithful, toilful labors on the part of the attendant, am also in general work. Am specially interested in the medical economic movement started in New York City, and am secretary of the West Side Physicians' Economic League. The recent killing of the Boylan drug bill, after passing the Senate, was more due to this medical economic movement than any other force. Medical men outside of New York City do not appreciate the involved conditions here. We give away twenty millions of dollars of services in clinic, dispensary and hospital yearly. Further the horde of B. A.'s, M. A.'s, and Ph. D.'s from our colleges and universities are largely engaged in regulating medicine and other professions. The lay settlement worker is paid a salary—the medical man nothing. The really indigent sick are often crowded out of clinics by people who can pay—the man who does pay his doctor employs a physician who is liable to have been devitalized by heavy work in clinic and who is wondering how much his patient can pay him. Lastly, all or much of this so-called uplift work promotes a wretched form of socialism, pauperizing and making liars of people who fall for the temptation which we hold out to them of free treatment. If every medical society in the State would devote one year to economics, there would be happier medical men and more capable medical men.

"The tendency in medical education is to formula and rule. A senior medical student said to me the other day—'The recent graduate cannot make a diagnosis away from the laboratory while you old fellows can.' Our Alma Mater has always taken on new thought in its teaching, but it has always stood for broadly trained clinicians with the highest professional ideals—may she so continue. I hope to see you in June.

"In memoriam: My lady wife lived with me from 1891 to 1896 and was then translated to her immortality—I have not remarried and have no children—life has been lonely but not lonesome. Would that it had been different.

"Am at 266 West 77th street and never see any of the class which is a matter of regret."

Dr. William H. DeLaMater, Mineville, N. Y. No reply to inquiries.

Dr. Noah L. Eastman, Albany, N. Y., died October 23, 1905.

Dr. Elmer E. Finch, Schodack Center, N. Y., died July 12, 1914.

Dr. J. F. Fitzgerald, Brooklyn, N. Y., writes: In reply to your communication of May 2nd, would say that at this date I cannot state whether I will be at the reunion in Albany on June 9th, or not. I hope to be there however, to meet the members of the Class of 1886.

"Since leaving St. Peter's Hospital I have been continuously in the State or city service, having never entered private practice. I was for nearly seven and one-half years on the staff of the Binghamton State Hospital, for ten years superintendent of the Rome State Custodial Asylum, Rome, N. Y., and for the past thirteen years have been general medical superintendent, Department of Public Charities, of the City of New York, so although I have not been in the practice of medicine for some twenty odd years, owing to administrative duties, I nevertheless have been in intimate and close touch with the members of the profession.

"I hear indirectly of you now and then and understand that you are successful. I am pleased to hear it. If I cannot be in Albany kindly present my best wishes to the members of the Class of 1886."

Dr. Alfred K. Freiot. No record.

Dr. H. C. Gordinier, Troy, N. Y., writes: "I thank you for your courtesy in reminding me of our third decennial reunion and I can assure you that it will be a great pleasure to meet our classmates on Alumni day.

"One can not appreciate or even realize that thirty years have so swiftly passed away. It seems but a fortnight ago since we received our degrees of Doctor of Medicine. It is sad however, at this moment to realize that many of our associates have passed beyond the realms of their labors into eternal rest. Our late historian, was a splendid fellow and one greatly admired by all of us. After thirty years of labor most of which has been spent in active medical work and in teaching at the college, I am still strong and vigorous and ready for the day's work.

"I located originally in my native town, Troy, N. Y., where I have remained with the exception of two years spent in post graduate study, ever since; never having regretted in the least such action.

"In the autumn of 1892, I was united in marriage to Miss Alice M. Beattie, daughter of the late Prof. David Beattie, for years superintendent of the public schools of Troy, N. Y. We have had five children, four daughters and one son. Two of our daughters Muriel and Alice May, aged respectively fourteen and thirteen years died in the midst of their girlhood from the results of mitral valve disease. Their irreparable loss was a crushing blow from which we have never recovered.

"During the past year I have been actively engaged in teaching medicine having directly on the advent of the reorganization, been appointed to the chair of medicine, by the board of trustees of our school. We have a strong faculty with full time specialists in the department of anatomy, physiology, pathology, bacteriology and chemistry. All other departments have been strengthened under the guidance of Dean Ordway.

"The first year's work has been a most successful one. Time will not permit me to go into details in regard to the various courses but I can assure you they are of the most practical type. The students under supervision. actually doing the work in the laboratories and in the hospitals making their own observations at the bedside."

Dr. ALFRED H. HOADLEY, Northampton, Mass., died December 20, 1909.

Dr. J. A. HOLLEY, Walton, N. Y., writes: "I located in Walton, N. Y. soon after graduation where I think I can say that I have met with a good degree of success in my work. My health has been very good having lost only two or three weeks' time on account of sickness during the thirty years of practice. I have an adopted son who is a dentist. I have a good wife, a good home, and something laid by for old age. I expect to be present at the reunion."

Dr. D. L. KATHAN, Schenectady. N. Y., writes: "I would like to say to the historian of the Class of '86 that I have been following my profession during all these years in the city of Schenectady; that I have been fairly prosperous and successful; that I am married and have one son, who is now a student in Union College.

"We each have but one person to make good—ourselves. So I am still in the harness. To rest content with results achieved is the first sign of professional decay.

"We hear of wars and rumors of wars around the old walls of the medical college, but I hope the flag of peace will soon be waving over the home of the brave and the free.

"I hope to meet you on the old camping ground June 9th, 1916."

Dr. ARIE V. KLOCK, Ames, N. Y. No response to inquiries.

Dr. WILLIAM H. LEMROW, New York City, died May 17, 1897.

Dr. **Harrie M. Lincoln**, Greenfield Centre, N. Y. No response to inquiries.

Dr. **Charles B. Mallery**, Aberdeen, Dakota, died April 3, 1910.

Dr. **Richard H. McCarty**, began practice in Schuylerville, N. Y., remaining there seven years and then moved to Saratoga, N. Y., where he is at present. Was coroner of Saratoga county for eighteen years. He is enjoying a first class practice.

Dr. **Francis T. McIntosh**, Troy, N. Y., died May 5, 1901.

Dr. **William McNaughton**. No record.

Dr. **J. S. Parent**, Galway, N. Y., writes: "In reply to your recent inquiry I wish to state, after graduating at A. M. C. Class of 1886 I have practiced in Galway with exception away, fall of 1886 I began to practice in Charlton and vicinity, I remained there until January 1911 when I moved to Galway. I took a full course at New York Post Graduate Medical School. Beginning the term of 1895. Have been very ill, twice since graduation. Had diphtheria about 1890. Had appendicitis in May 1913, was operated on by Dr. Edgar Vander Veer. Am still practicing at Galway, N. Y., and in good health. Perhaps it is needless to add I am still a bachelor.

Dr. **Ransom J. Perry**, Whitney Point, N. Y., died.

Dr. **James H. Reilly**, Memphis, Tenn. No reply to inquiries.

Dr. **John A. Robson**, Hall, N. Y. No response to inquiries.

Dr. **J. W. Sheffield**, Binghamton, N. Y., writes: "I opened an office in the village of Trout Creek, Delaware county, this State, the last of March 1886, where I remained with the exception of about three months, until the spring of 1891, when I took up a location at Sidney, N. Y. I remained there until the spring of 1899 when I sold out to Dr. L. M. Day and moved to this city where I am still doing a general practice.

"I have always taken an active interest in 'community betterment' wherever I have lived. While at Trout Creek I aided the church and Sunday school and the young people with their social and oratorical exercises. At Sidney I was president of the Y. M. C. A.,—a member of the Board of Education and served one year as president of the village and have also aided in the same line of public service here in this location.

"I married Miss Zana M. Clarke of Addison, Vt., in 1887. I have two sons. The older, Bernard C., is married and is living in Detroit, Mich., and the younger, Wesley T., a graduate of Hamilton College, Class of 1911, is working for the American Crucible Steel Co. of Syracuse, as a chemist.

"I am planning to attend the class reunion the 9th prox. and hope to meet you and all the class that are still living, at that time."

Dr. **Arthur D. Stowitts**, Sidney, Nebraska, died March 13, 1910.

Dr. **Edward H. Taft**, last known to be at Buffalo, N. Y. No response to inquiries.

Dr. **W. Steele**, Mongaup Valley, N. Y., writes: "Located at Mongaup Valley, N. Y. March 11, 1886, and am still here; married 1889. Built a drug and dispensing office in 1893. Have been president of the Sullivan County Medical Society. Have been health officer of my own town for twenty years and an adjoining town for three years. Have a wife and four children. My son, Edson Hun Steele is attending his first term at the Albany Medical College. Have had a fair share of success and a little of this world's goods and taken some comfort as the last thirty years have been passing along. Hope to shake your hand on June 9, 1916."

Dr. A. P. Van Deinse, Sayville, L. I., writes: "You ask me to give you a synopsis of my thirty years of professional life. This is easily done, as I am pleased to be able to inform you that it has been very uneventful. After leaving the A. M. C., I went to Europe where I studied for a period of two years. I was fortunate enough however to get a degree as doctor of medicine from the French College of Medicine. On my return I located in Sayville, Long Island, where I have been in practice ever since.

"I have been moderately successful and I suppose could have done a larger practice if it were not for the fact that I have always been addicted to indolence and have preferred a life of ease and comfort to the bustle and self-sacrifice a large practice entails. In addition to my private practice I am visiting physician to the Brooklyn Home for the Aged, also on the staff of the Babylon Hospital, and for the past two years have been the school physician. I am still a bachelor and find my greatest pleasure in my home and library.

"I frequently have the pleasure of meeting the graduates of the A. M. C., many of whom are holding important positions in Long Island. I would very much like to be with you on the ninth, but will be unable to do so on account of other pressing engagements. I hope the meeting will be a great success. Please extend my greetings to all the old classmates and do not forget if you or any of the other boys ever visit Sayville call on your old friend and classmate.

Dr. Charles T. Walton, Port Henry, N. Y. No reply to inquiries.

Dr. Stephen H. Webster, Troy, N. Y., died January 6, 1899.

Dr. William M. White, Amsterdam, N. Y., died December 28, 1905.

Dr. Richard A. Woodruff, Pittsfield, Mass. No response to inquiries.

Dr. Richard H. McCarty,
Class Historian.

HISTORY OF THE CLASS OF 1896.

The Class of 1896 consisted of fifty-one members. Our records show five have died.

Dr. Sanford Bassler, Joliet, Ill., died January 13, 1916.

Dr. Albert C. Baxter, last known to be at Oswego, N. Y. No reply to inquiries.

Dr. Julius W. Blakely, last known to be at Highland, N. Y. No response to inquiries.

Dr. William I. Brandow. No record.

Dr. John P. Carver, last known to be at Simsbury, Conn. No response to inquiries.

Dr. Frederick T. Clark, Westfield, Mass., writes: "Your letter of the twenty-fourth of April reminded me with a distinct shock of the approaching twentieth anniversary of our graduation in medicine. I want very much to be present at the meeting of the Alumni Association on June ninth and am planning with that end in view. The anticipation of seeing the faces of the boys of twenty years ago and renewing the friendships of those days is pleasant indeed.

"As regards my personal history there is very little of interest to add to that I noted in my letter to you on the occasion of the tenth anniversary of our graduation.

"I am practicing my specialty in the same offices where I began my private work sixteen years ago. My work has broadened and keeps me as busy as I can wish. Outside interests of a civic and social nature have claimed some of my time, as it is my belief that every man owes a portion of his time to the community in which he lives. My associations in the town where I live and practice are very pleasant and I love the place. It is my aim to keep in touch with the best work that is being done in my specialties. To that end it has been my practice each year to visit one of the clinics of our large medical centers and attend the annual meetings of one of the national special societies of which I am a member. I have attended the clinics of the Clinical Congress of Surgeons each year since their inception including the London meeting which was to those who attended an experience not to be forgotten, especially the days of confusion at the outbreak of the European war when the question of homeward transportation was agitating the minds of most Americans.

In your letter you say that each man is expected to write a personal history of his career since graduation and in this note to you I should feel ungrateful if I did not give expression to a deep appreciation of the good things that have come into my life and made its living worth while. I mean to be present on our anniversary day. If anything should prevent, please express my good wishes and congratulations to each member of the Class of '96."

Dr. Edward J. Collier, last known to be at Amsterdam, N. Y. No response to inquiries.

Dr. John J. Dever, Glens Falls, N. Y. No response to inquiries.

Dr. R. F. Diedling, Saugerties, N. Y., writes: "Not much to write since I wrote you last time. Am still practising medicine and doing a few little things on the side. Will try and make time to attend the Alumni meeting."

Dr. F. B. Dezell, Lynn, Mass., writes: "Soon after graduation I came to Lynn, Mass., and have been on the same street ever since. I think I am getting my share and have prospered. In April 1901 I was married and have two children, one a boy of ten and a girl of six. I am a member of the Massachusetts Medical Association, a charter member of the Lynn Medical Fraternity, a member of the East Lynn Lodge I. O. O. F. and do considerable surgery for the Bay State Railway Company. I have taken post-graduate courses in Harvard. I do a general practice. I would like to be present at the meeting on June 9. 1916, but doubt it very much."

Dr. Harry O. Fairweather, Troy, N. Y., died April 8, 1909.

Dr. Henry Field, Marathon, N. Y., writes: "It does not seem as long as twenty years when the boys of '96 separated from the A. M. C., but such it is. Time is fleeting. Many changes have occurred in my life but thanks to a vision of the possibility of doing something worth while for myself and others. Must say that I feel some satisfaction with results. My health has been and is very good. Yet I begin to feel the friction rub and wear of a continuous work and struggle. I came to Marathon, N. Y., soon after graduating and have been here ever since. Have kept abreast of the times in science, art, and religious activities and have been very successful in the practice of medicine financially and other ways. Have been a trustee and steward of the Methodist Episcopal Church and a member of the Marathon High School Board for several years, also health officer of the town and village of Marathon. Most of the time I have resided in Marathon. Have two children a boy and a girl born since coming here. Henry, Jr., has graduated from the B. S. course in Syracuse University and expects to enter Medical College next September. Mary is a junior in our high school and expects to graduate next year. I hope I shall be able to meet all the boys of '96 in Albany on June 9th and see them once again."

Dr. Arthur E. Falkenbury, Whitehall, N. Y., writes: "After graduating I located in New York City taking advantage of clinics until January 4, 1900, when I located in Whitehall where I have practised ever since. Was married in June 1899 to Miss Lena Hodskins of Westport, N. Y. We have three children, a daughter fifteen years of age, a son thirteen and a son eleven. Am doing a general practice, learn something every day and am interested in my work. Best wishes to all."

Dr. LeLand LeG. Fillmore, last known to be at Los Angeles, Cal. No response to inquiries.

Dr. John C. Fusmer, Palatine Bridge, N. Y.

Dr. Edward Gillespie, Binghamton, N. Y., writes: "The history of my career since graduation in '96 is not a very eventful one. Soon after graduating, I entered the New York State Hospital service as interne and have since continued in the service; now being senior assistant physician. In November 1902, I married Rose Curran, daughter of the late B. S. Curran of Binghamton, N. Y., and we are blessed with three little girls, Alice Curran, Helen Ross and Ruth Joyce aged about eight, five and two and one-half years respectively."

Dr. George B. Grady, Watervliet, N. Y. No response to inquiries.

Dr. Ira D. Hasbrouck, Washington, R. I. No response to inquiries.

Dr. Frank A. Hennessy, California, died July 5, 1915.

Dr. ERVING HOLLEY, Brooklyn, N. Y., writes: "After leaving Albany in 1896, I went to Troy, N. Y., where I served as interne in the Marshall Infirmary for fourteen months, then took up general practice in Watervliet remaining until December '97, when I entered the State Hospital service and have since continued in this field of work. I married in 1910 Miss Clementine Metzger of Olean, N. Y. We have three children. I hope to be present at the reunion in June."

Dr. JOHN W. JENNINGS, Mohawk, N. Y. No response to inquiries.

Dr. GARRETT V. JOHNSON, Schenectady, N. Y., writes: "After graduation I started practice in Oneonta, N. Y. When the call came from the president for volunteers at the outbreak of the war with Spain, being a member of Company "G" 1st Regt. N. G. N. Y., I went into the service of the United States with my company. I was immediately assigned to the hospital service under Major Charles E. Davis, surgeon, with whom I served nine months.

"While home on a furlough in January 1899, my brother-in-law, Dr. E. P. Van Epps, died and I took his office and practice here in Schenectady and have been here ever since.

"In August 1899 I married and have two children.

"I have had my share of the ups and downs of general practice and while I am not rich I am still out of the poor house."

Dr. HENRY W. KEATOR, last known to be at Fleischmanns, N. Y. No response to inquiries.

Dr. FRANK A. KELLER. No record.

Dr. FRANK B. MAYNARD, Rochester, N. Y., writes: "As I have achieved neither fame in the field of medicine nor the glory of a legislative investigation, just put my name in the list of survivors. To give the record a more personal touch you might add that I have a wife, a son, an automobile and a half, and some patients.

"There is somewhat less hair on the top of my head than there was in '96 and I have just received a *whole* bill for repairs on that half of an automobile, otherwise I am in good health.

"Taking it all in all, I will ask you to cast a white bean for me when the roll is called, for my day (of twenty years) has been fully as pleasant, I believe, as is allotted the average of those who sign birth and death certificates and perform sundry other acts commonly referred to as doing the people—good."

Dr. JAMES T. MCKENNA, Troy, N. Y. No response to inquiries.

Dr. FRANK MCLEAN, Chenango Forks, N. Y. No response to inquiries.

Dr. AMASA P. MUIR, died in New York, June 2, 1905.

Dr. PARKER MURPHY, Rochester, N. Y., writes: "I opened an office at Rochester, N. Y., November '96 where I have remained up to the present time. I visited Europe in 1903 and 1909 and in 1913. Built a home at 1020 Lake avenue, which I maintain exclusively as a residence. I have one son who is soon to enter the university. I hope to see as many of my classmates as possible on June 9th."

Dr. Francis P. O'Brien. No record.

Dr. Elbert A. Palmer, Saratoga Springs, N. Y. No response to inquiries.

Dr. Edward J. Parish, Oneonta, N. Y. No response to inquiries.

Dr. Francis X. Pidgeon, New York City. No response to inquiries.

Dr. Albert H. Rodgers, Corning, N. Y., writes: "I wish I could be with you at the '96 reunion but I am not sanguine about it. So far as history goes, what was printed in the 1906 report remains true of me. Since then I have just been practicing medicine as a G. P. with a side line as anaesthetist to several of our surgeons. That is about all. Was secretary of the Southern Tier Homeopathic Medical Association for about ten years, have been member of Corning Board of Health for the past two years. Best wishes to all the men who appear at the reunion."

Dr. T. Avery Rogers, Plattsburgh, N. Y., writes: "Personally I have not anything startling to report, no epoch making discovery. I now make a specialty of diseases of the eye, ear, nose and throat and find a pleasure in having my field of work more limited than formerly, as it makes more satisfactory work possible and encourages efficiency. I have been blessed with health and a healthy family of a wife and one son, seven years of age.

"I feel very grateful for the measure of success I have attained and also to the faculty of the Albany Medical College for their patient steadfastness in pounding some medical knowledge into my cerebral cells and better than that for the desire that was born in me in the old college to acquire more medical lore.

"I inclose letters so far received. I hope to be in Albany on Nov. 9th, but if I can not manage it I hope you will fill my place.

Dr. Waldo H. Sanford, New York City. No response to inquiries.

Dr. Will H. Schwarz, last known to be at Colton, N. Y. No response to inquiries.

Dr. Jesse M. Scott, Schenectady, N. Y. No response to inquiries.

Dr. James C. Sharkey, Rensselaer, N. Y. No response to inquiries.

Dr. Henry Larned Keith Shaw is practising at 361 State street, Albany. Married, March 27, 1906, to Susanne Sturtevant Burrell of Little Falls, N. Y. Has two daughters. Clinical professor diseases of children, Albany Medical College, and Director of the Division of Child Hygiene, New York State Department of Health, since 1912. American editor Pfaundler and Schlossman's System of Diseases of Children (7 volumes). Member American Pediatric Society and Director of the American Association for the Study and Prevention of Infant Mortality.

Dr. Edward G. Stout, Utica, N. Y., writes: "I wish that I had something of an autobiographical nature that would be interesting to write, but I fear such is not the case. Not a great while after graduation, I entered the New York State Hospital service and have continued in this line of work up to the present time. For a year I was in the St. Lawrence State Hospital at Ogdensburg, and have since been in the institution at Utica."

Dr. Roscoe J. Taylor, East Nassau, N. Y. No response to inquiries.

Dr. Burton Van Zandt, Schenectady, N. Y. No response to inquiries.

Dr. John D. Vedder, Johnstown, N. Y., writes: "I am glad to be able to respond to your kind letter of inquiry. I began doing general practice in Johnstown, N. Y., soon after our graduation and have been here ever since. Have been a member of the board of health and was health officer of the city for a number of years. Am now school physician. We have a son seventeen years old attending high school and a daughter eight years of age. I remember with gratitude the untiring efforts of the faculty of the college in our behalf while we were under their instruction. I trust a large percentage of our class may be able to be present at the meeting on June 9th to renew acquaintances and talk over the pleasant experiences of the days of '96."

Dr. Joseph E. Vigient, last known to be at Red Hook, N. Y. No response to inquiries.

Dr. Edward J. Wiencke, Schenectady, N. Y., writes: "Replying to your favor of the 24th instant, I beg to say that I am still located at Schenectady where I have practiced since graduation. While I haven't set the world on fire, I am perfectly satisfied with the way I have been used since I became a 'sawbones.' Hope to be in Albany on the 9th."

Dr. Thomas C. Wright, Troy, N. Y., died February 10, 1906.

Dr. Jerome E. Young, last known to be at Lansingburgh, N. Y. No response to inquiries.

Dr. Philip S. Young, Sidney, N. Y., writes: "Your formal notice of the meeting of '96 is at hand and I am expecting to be present. Trusting all is well with you."

Dr. T. Avery Rogers,
Class Historian.

HISTORY OF THE CLASS OF 1906.

The Class of 1906 consisted of thirty-two members. Our records show one member has died.

Dr. H. F. Aebrecht, Green Island, N. Y., writes: After graduation, served a year in the Troy Hospital, following which I took summer courses in general diagnosis, paying particular attention to diseases of the heart and lungs, at hospitals in Vienna and Heidelberg. Returning from Europe, opened an office in Green Island. Am acting attending physician on the staff of the Troy Hospital. Have just finished a four-year term as health officer and am still serving as registrar; am married and have two children, a boy and girl. Will surely attend our reunion and will be very glad to renew old friendships.

Dr. Fred N. Bibby, Albany, N. Y., writes: "After graduating in 1906, was interne at the Albany Hospital one year. Spent the next two years assisting Dr. Neuman and the following one year assisting Dr. Lochner. Have been practicing at 234 Madison avenue for the past five years."

Dr. John Breen is practising at Schroon Lake. No response to inquiries.

Dr. R. M. Collie, Schenectady, N. Y., writes: "Your letter received; doesn't seem very long ago—ten years—but I guess it's so. You ask for all the honors, etc,. that have been showered upon me during that time. It's just this. After leaving college, was resident physician to Ellis Hospital, Schenectady, from June, 1906, to June, 1907, then located in Schenectady and have resided here ever since. Have kept to straight medicine and do no surgery. Was married in 1910 and have a girl five years old. Am one of the visiting physicians to the Day Nursery and Free Dispensary. Member of Schenectady Academy of Medicine, Schenectady County Medical Society, New York State Society and American Medical Association. Have done fairly well and cannot complain at all. Hope to see the members of 1906 at the Alumni dinner on June 9th."

Dr. Morey C. Collier, Painted Post, N. Y. No response to inquiries.

Dr. Charles E. Collins is practising at Rensselaer, N. Y. No response to inquiries.

Dr. Frederick C. Conway, Albany, N. Y., writes: "Am doing internal medicine in Albany. Attending physician County Hospital, Maternity Hospital and Infant Home and South End Dispensary, instructor in medicine, Albany Medical College, and have just finished a term as president of the Albany County Medical Society."

Dr. Edward A. Dean, Lackawanna, N. Y., writes: "Greatly regret inability to join in person in the tenth reunion of our class and exchange greetings with the boys. Attending the meeting of the State Medical Association at Saratoga recently prevented my leaving home again so soon. Had I known in time would have cut the medical meeting to have been with you at reunion. As to personal history, I located in Lackawanna, a steel city, of some 15,000 population, immediately after leaving college. Have served as health physician and past three years as medical inspector for schools; reappointed same for next year with increase in salary, making $1,000. Surgeon for B. & L. E. Traction Company for past nine years. Am making sufficient to maintain wife and family of seven animals, all members of the Humane Society, of which I am proud to be a special officer, aiding in alleviating suffering and abuse of animals. Just send out cards a month ahead for next reunion and nothing save death will prevent my meeting the boys. Yours with nothing but happy memories of Albany Medical College."

Dr. A. S. Dederick, Brooklyn, N. Y., writes: "Received your note of the 19th inst., having been forwarded to me from Rhinebeck. Yes, Sam, the calendar says we have been out of college ten years, but it does not seem that long. It is up to us to celebrate and I would like very much to be with you, but having just located in the big city, I hardly feel that I will be able to attend. After leaving the Albany Medical College, I spent one year as interne in the Samaritan Hospital at Troy, N. Y. Following this, I located in Colonie, N. Y., where I remained about a year. I then moved to Rhinebeck, N. Y., where I remained a little over seven years, enjoying a prosperous practice. An opportunity having presented itself in New York City, I moved to Brooklyn, where I am now engaged in general practice. Wishing you and the boys a happy and prosperous future."

Dr. L. R. **Dunbar**, Leon Springs, Texas, writes: "Your letter reached me and was certainly glad to hear from you; have traveled considerably since I last saw you. Came into the United States Army as contract surgeon, March 7, 1907; commissioned first lieutenant Medical Reserve Corps, June 25, 1909, and captain Medical Corps, June 25, 1912, which rank I still hold. Spent two years' service in the Philippines, February, 1910, to February, 1912; years 1912 and 1913 at Letterman General Hospital. Took post-graduate course, September, 1915, to March, 1916, at Army Medical School, Washington, D. C., specializing in x-ray work. Accompanied Second Battalion, Third Field Artillery, from Fort Meyer to Fort San Houston as surgeon, May 1st to present time. Am now in camp with same battalion at Leon Springs, twenty-two miles from San Antonio, Texas. Have a fine camp site on rolling limestone hills, plenty of good artesian well water for drinking. Have a healthy command and little professional work outside of camp sanitation. Am also running the officers' mess (thirteen officers in all) during my leisure time. Married Miss Paquita Soles at Hot Springs, Ark., November 12, 1912. No increase yet. Hope you are enjoying civil practice. If you see any of the class give them my address and say I would be glad to hear from them. Leon Springs is a government reservation twenty miles from nowhere and just as exciting so an occasional letter would break the monotony."

Dr. T. F. **Doescher**, Albany, N. Y., writes: Was born April 13, 1883, at Albany, N. Y. Graduated Albany High School, June, 1901, and Albany Medical College, May, 1906. Spent a year as interne Albany Hospital, 1906-7, a year as assistant pathologist Bender Laboratory, a year as Dr. E. A. Vander Veer's assistant, and have since then been associated with Dr. L. H. Neuman. Married Miss Emma Grace Pendell, June 22, 1909. No children. Spent the year 1913 in study abroad, with particular reference to diseases of the gastro-intestinal tract. Now practicing at 266 Lark street, Albany. Attending gastro-enterologist South End Dispensary, and assistant gastro-enterologist Albany Hospital.

Dr. V. B. **Ehle**, Gloversville, N. Y., writes: "Doing general practice in Gloversville, Fulton Co., N. Y. Attending physician at Nathan Littauer Hospital, county physician from 1909-1912, city bacteriologist from 1908-1911. Have been moderately successful, no wives, no children. For full information regarding financial standing, see Dunn's report. Am certainly coming to the banquet and hope to see all the bunch together again."

Dr. H. Ernest **Gak**, So. Onondaga, N. Y., writes: "I was fortunate to graduate from the Albany Medical College with the Class of 1906 and began practice the following July in Syracuse. After plugging along for seven months and not being satisfied with my assets, I decided to try a country town. February 26, 1907, I moved my few belongings to South Onondaga and work began to come my way immediately and has been ever since. In March 1908, I took unto myself a wife thinking I needed a helpmate and this she certainly has proved. I am doing a general practice and have no competitor. My nearest competitor is six miles away. In January 1907. I received the appointment as physician to the Onondaga Indians and am still holding the position. I belong to the Onondaga Medical, New York State and American Medical Societies."

Dr. G. R. Goering, Flint, Michigan, writes: "After graduation I located at Utica for six months. Thereafter I located at Florence, N. Y., where I had an unopposed practice. Remained there for three years. I became married in 1907 and had a girl born in 1908. Long drives, hard work and the prospect of bettering myself caused me to move to Flint, Mich., in 1909. A few years after locating here, my wife divorced me and in 1914 I married a second time. One year of happy life was marred by the grim reaper as my wife died in June 1915. Am enjoying the fullest confidence of an ever growing clientele in general practice."

Dr. S. B. Grant, Munnsville, N. Y., writes: "Am expecting to be in Albany for Commencement, June 9th. There is very little of interest concerning my past history. After graduating I was in Faxton Hospital, Utica, one year. July 17, 1907, I began the practice of medicine in Oxford, N. Y. In April 1913, I removed to Munnsville, N. Y., my present location. April 20, 1908, I married Miss Inez A. Fuld, a graduate of Faxton Hospital Training School. No children have as yet blessed our home."

Dr. C. B. Hawn, Albany, N. Y., writes: "I am married with two children. Am assistant attending physician to the Albany Hospital and St. Peter's Hospital, also chief of the Tuberculosis dispensary. I will do my best to be on hand June 9th."

Dr. Percival W. Harrig is engaged in active practice at Albany, N. Y. No response to inquiries.

Dr. Joseph F. Harris, last known to be at New York City. No response to inquiries.

Dr. Samuel Kemp, Albany, N. Y., writes: "Spent one year and four months in the Boston Emergency and General Hospital. Practiced in Schaghticoke, N. Y., until May 1, 1909. Practised in Troy until May 1, 1910. Since then have practised in Albany where I am now located. Am married and have one son six years old. Am in general practice and am a member of the regular and usual medical societies."

Dr. Winfield S. Kilts is practising at Canajoharie, N. Y. No response to inquiries.

Dr. W. A. Krieger, Poughkeepsie, N. Y., writes: "As you know I graduated May 1, 1906 from the Albany Medical College. June 1, 1906. I entered the Albany Hospital as interne and complete my service June 1, 1907. June 1, 1907, was appointed house pathologist to the Albany Hospital and remained as such doing my work at Bender Laboratory until July 1, 1908. July 1, 1908 was appointed pathologist to Vassar Bros. Hospital, Poughkeepsie, N. Y., and retained that appointment until 1912 when I resigned and was appointed assistant attending in the Eye, Ear, Nose and Throat department which I still retain. Was appointed city physician to Poughkeepsie, January 1, 1910 which I resigned July 1, 1910 to become associated with Dr. W. G. Dobson of Poughkeepsie, confining my work to eye, ear, nose and throat. This association which has been exceedingly pleasant I still retain. The summer of 1912 I spent in Europe studying in Vienna, Paris, Berlin and London. Present appointments assistant attending eye, ear, nose and throat, Vassar Bros. Hospital, Poughkeepsie, and also attending dispensary physician eye, ear, nose and throat, to the same hospital, attending eye, ear, nose and throat, Old Ladies' Home, Poughkeepsie. Societies: Medical Society of the State of New York, Dutchess County Medical Society, Poughkeepsie Academy of Medicine, Anglo-American Association of Vienna. Am still single and no children. I hope to be present at Commencement reunion and will surely attend banquet."

Dr. PRICE LEWIS, Glentana, Montana, writes: "Am sorry not to be able to attend reunion. Have moved about considerably since graduation still hope not to become a tramp. Spent my first year at the Homeopathic Hospital, at Albany after which located at Holland Patent, N. Y. Served as coroner, Oneida county, N. Y. 1911 to 1913 where I moved to Plentywood, Montana. There spent three pleasant and profitable years in practice with Dr. E. G. Steele of our class. Am just getting settled at my present location. Am married and have one boy."

Dr. FLOYD D. MICHAEL, Lasselsville, N. Y., died October 29, 1908.

Dr. DAVID C. NOLAN is practising at Saratoga Springs, N. Y. No response to inquiries.

Dr. CHARLES A. PRESCOTT, Croton-on-Hudson, writes: "I started practice at Hague-on-Lake George where I stayed three years. During the first year married Miss Ethel Shaw of Warrensburgh, N. Y. Have no children.

"At the end of the three years did post-graduate work in Philadelphia in eye, ear, nose and throat. Entered practice again at Chestertown, N. Y., and after two years moved to Canajoharie, N. Y., where I practiced four years.

"I am at present doing general practice at Croton-on-Hudson also having special hours in Ossining for ophthalmology.

"Was interne at Albany City Hospital, health officer of two or three towns and coroner of Warren county."

Dr. W. A. REYNOLDS, Albany, N. Y., writes: "Was interne in Albany Hospital for one year. Assistant to Dr. A. Vander Veer one year. General practice, Albany since 1908. Married December 25, 1909 and have one boy, 1913."

Dr. R. G. STEELE, Plentywood, Montana, writes: "You cannot imagine how my heart yearns to be with you all on that occasion and to recall the good old days.

"But it is not to be; the distance is too great and time is fleeting: furthermore in this productive country there has been 'marriage and giving in marriage,' and our population is rapidly increasing. Every train is loaded, but the stork line is still running on schedule, and doing a profitable business, and you know we must 'make hay while the moon shines.'

"However doctor, I assure you, that on that evening, I will be with you all in spirit, and wish you all well.

"You ask for a brief history of my experience since leaving college. This is difficult, for we of the medical profession are men of acts, not of words. However, here are the facts, and perhaps you will overlook the crudeness of their telling.

"After graduating, I spent six months in active hospital work, in the Union Hospital, Lynn, Mass., and then entered into active practice at Conway, New Hampshire, where I stayed for one year and a half, while there I established a good general practice, but became convinced that the medical profession in the smaller eastern towns was neither the high road to riches, nor a flowery bed of ease. The work was hard and fees were small, however I will always have a fond memory for Conway, N. H., for it was there I became acquainted and married Miss Marion C. Charles. Since our marriage, we have been blessed with two husky, manly boys, Eugene Steele, Jr., age eight and Jack Steele, age five.

"After marriage, I took Horace Greely's advice, and came west, first locating at Barlow, N. D., where I stayed one year, and then hearing of what seemed an unusual opening in Eastern Montana, I came to Plentywood, where six years ago I built the first residence on the townsite. The country has prospered, the work has been hard. Calls from thirty to fifty miles have been nothing unusual, but the fees were good and payment reasonable certain. I also invested in land, and started a drug store, both investments proving fortunate. Lands doubled in value, the last year, and I recently incorporated the drug store with a capital stock of $10,000 fully paid in.

"During the year 1913, feeling that the work was too arduous (I was still the only physician here, and had a territory of from thirty to fifty miles in each direction), I formed a partnership with our classmate, Dr. Price Lewis. This partnership continued for three years, and was the pleasantest of all my professional career. Dr. Lewis is an able and conscientious practitioner, an ideal partner, and possessed an exceptionally pleasing personality. It was with real regret, that we dissolved our partnership, Dr. Lewis taking a homestead of 320 acres of choice land, close to a flourishing new town, 90 miles west of here. During my partnership with Dr. Lewis, I took a post-graduate course, at Harvard, which was of inestimable value to me.

"I am serving my second term as alderman of our town, now having a population of over 1,500. I have also devoted a little time to fraternal work, being a 32 degree Mason and a Shriner, and a member of numerous other societies.

"Again regretting that I cannot be with you on June 9th, I remain, Most sincerely yours."

Dr. John F. Robinson was last known to be at Belgrade, Missouri. No response to inquiries.

Dr. Willis N. Simons, is practicing at St. Johnsville, N. Y. No response to inquiries.

Dr. E. G. Whipple, Rochester, N. Y., writes: "I greatly regret my inability to return to Albany for our 10th reunion but it's out of the range of even a possibility. Give my best regards to the bunch and express my regrets. I will not burden anyone with my perigrinations for the first five years after graduation. Suffice it that for the last five, I have been in Rochester, N. Y. and have managed to live and remain happy during this time. Yes, Sam, I'm married, one wife, but more children. We have one daughter about three years old and a boy and a girl about two weeks old (I always did bet on a small pair). I'll await returns of the reunion to see if I hold the record. Kindest regards to you and ours."

Dr. LeMon Washburn, Wantagh, N. Y., writes: "Have been in general practice, began at Hudson Falls. Am now residing at Wantagh, Long Island, and have office in Hempstead where I do eye, ear, nose and throat work exclusively. Am now connected with the eye department, New York Post-Graduate Hospital and was formerly assistant surgeon at Bronx Eye and Ear Infirmary 1909 to 1912."

Samuel Kemp,
Class Historian.

The Nominating Committee submitted the following report by its Chairman, Dr. Hermon C. Gordinier:

For President

Dr. Theobald Smith ('83), Princeton, N. J.

For Vice-Presidents

Dr. R. B. Lamb ('91), Troy, N. Y.
Dr. G. G. Whitaker ('65), Fulton, N. Y.
Dr. Earl D. Fuller ('78), Utica, N. Y.
Dr. George W. E. Goodell ('94), Wayland, N. Y.
Dr. LaSalle Archambault ('02), Albany, N. Y.

For Recording Secretary

Dr. J. Montgomery Mosher ('89), Albany, N. Y.

For Corresponding Secretary

Dr. James N. Vander Veer ('03), Albany, N. Y.

For Treasurer

Dr. Robert Babcock ('84), Albany, N. Y.

For Historian

Dr. Arthur J. Bedell ('01), Albany, N. Y.

For Members of the Executive Committee (term three years)

Dr. J. Lewi Bendell ('97), Albany, N. Y.
Dr. Wm. J. Nellis ('79), Albany, N. Y.
Dr. Joseph A. Cox ('01), Albany, N. Y.
Dr. Otis Z. Bouton ('98), Fultonville, N. Y.

On motion of Dr. Mereness the report was accepted and the Recording Secretary was directed to cast one ballot for the names contained in the report. Dr. Mosher then read the names and President Lewi declared the members named in the report duly elected officers of the Association for their respective terms.

A special committee on revision of the Constitution and By-Laws of the Association presented its report by its chairman, Dr. Bedell. The proposed Constitution and By-Laws were read and on motion of Dr. Eugene E. Hinman, were referred to the Executive Committee for consideration and future report.

President Lewi introduced Dr. Thomas Ordway, Dean of the College, who addressed the Association in a few informal remarks.

Announcements of the program of the day, the commencement exercises and alumni dinner having been made, and no further business appearing, the Association adjourned.

Commencement Exercises.

The eighty-fifth commencement exercises of the Albany Medical College were held in the Auditorium of the New York State Education Building, on Friday afternoon, June 9, 1916, at three o'clock, in the presence of a large audience. Hon. Simon W. Rosendale, President of the Board of Trustees of the College, presided, and upon the stage were seated the members of the

Faculty, officers of the Alumni Association, and prominent citizens.

The following was the

ORDER OF EXERCISES.

HON. S. W. ROSENDALE, PRESIDING.
President of Board of Trustees.

Music—Selection.

Prayer..................................REV. CHARLES C. HARRIMAN

Address..................................DR. GEORGE BLUMER,
Dean, Medical Department, Yale University.

Music—Selection.

AWARD OF PRIZES.

LUTHER H. TUCKER,
Secretary of Board of Trustees.

CONFERRING DEGREES.

CHARLES ALEXANDER RICHMOND, D.D., LL.D.
Chancellor of the University.

Music—Selection.

(HOLDING'S ORCHESTRA.)

The Graduating Class was as follows:

James MacFeeters Archibold	Cohoes
Harold Arthur Bancroft	Schenectady
Morgan Otto Barrett	Albany
Jacob Blumberg	Jersey City, N. J.
Edward Oscar Boller	Elizabeth, N. J.
William Charles Brons	Jamaica
John Dennis Carroll	Troy
William James Carroll	Sag Harbor
Richard Patrick Doody	Cohoes
Loyal Lindsey Dunlop	Stony Creek
James Walter Fitzgerald	Troy
Emanuel Martin Freund	New York
Glenn Daniel Frost	Van Hornesville
Karl Gebhard	Mount Vernon
William Goldhush	Brooklyn
John Luverne Hemstead, Ph.G	Waterford
Hyman Hershberg	Albany
Frederic William Holcomb	Palenville
Howard Conkling Johnston	Horicon
John Christian Knapp	Philmont
Charles Augustus Krauss	Watervliet
Francis James Lawler	Pulaski

Francis Buckley Maguire	Albany
Royal Harrison Mayhew	Antwerp
Edward Leo McDermott, B.S	Schenectady
John Williams McKeever	Newburg
Walter Hugh McShane	Troy
Edward Bernard O'Keeffe	Albany
Matthew Francis Olstein	Peekskill
Robert Morris Palmer, A.B	Gloversville
Orla James Park	Hudson Falls
Harold Artemus Peck	Albany
Ray Eugene Persons	Jewett
George William Pullen, Jr	Cleveland, Ohio
Abraham Max Rabiner	Albany
Theodore Dorris Reed	Albany
George Mark Richards	Corning
Clarence Fay Rinkle	Boonville
Lester Edwin Sanford	Albany
Frank Phillip Schneider	Utica
Leslie Boyd Seaport	Cohoes
Howard Barton Swan	Chestertown
Harry Knibb Tebbutt, Jr	Albany
Leo Ross Tighe	Cohoes
Howard C. Van Keuren	North White Lake
Earl Charles Waterbury	Campbell Hall
Theodore Stephen West	New York
Raeburn James Wharton	Richmondville

Mr. Tucker announced the award of prizes. The Vander Poel Prize, endowed by Mrs. Gertrude W. Vander Poel, in memory of her husband, the late S. Oakley Vander Poel, for many years a professor in the College, consisting of a clinical microscope and accessories, offered to the senior student passing the best bedside examination in general medicine, was awarded to Dr. John Luverne Hemstead, with honorable mention to Dr. Hyman Hershberg.

The prize, consisting of an ophthalmoscope, offered by Dr. Merrill for the best final examination in ophthalmology, was awarded to Dr. John Luverne Hemstead. Honorable mention to Dr. Hyman Hershberg.

The Townsend Physiology Prize, endowed by the late Professor Franklin Townsend, Jr., M. D., was awarded to Mr. Jacob Epstein, for passing the best examination in physiology at the end of the first year of study. Honorable mention to Mr. Alexander Mason.

Dr. Boyd's Prize to the student passing the best final examination in obstetrics was awarded to Dr. Clarence Fay Rinkle. Honorable mention to Dr. Howard Barton Swan.

The Daggett Prize, consisting of sixty dollars, for the best "anatomical specimens," was awarded to Mr. Lloyd Edward Miller, and the second Daggett Prize, amounting to thirty dollars, was awarded to Mr. Webster Merchant Moriarta.

The Daggett first prize for the best "deportment irrespective of scholarship," consisting of sixty dollars, was awarded to Dr. Hyman Hershberg, and the second prize, consisting of thirty dollars, was awarded to Dr. Glenn Daniel Frost.

The prize, consisting of an emergency outfit, offered by Dr. Donhauser, to the third year student passing the best competitive examination in surgical diagnosis and surgical pathology, was awarded to Mr. William Edwin Gazeley. Honorable mention to Mr. Chester Bruce Van Gaasbeek.

The following hospital appointments are announced:

Albany Hospital: Harold Arthur Bancroft, John Luverne Hemstead, Edward Bernard O'Keeffe, Matthew Francis Olstein, Harold Artemus Peck, Abraham Max Rabiner, Harry Knibb Tebbutt, Jr., Theodore Stephen West.

St. Peter's Hospital: Francis Buckley Maguire, Ray Eugene Persons, Lester Edwin Sanford.

Samaritan Hospital, Troy: Morgan Otto Barrett, Hyman Hershberg, Charles Augustus Krauss, Howard C. Van Keuren.

Troy Hospital: John Dennis Carroll, Richard Patrick Doody, James Walter Fitzgerald, Glenn Daniel Frost, Walter Hugh McShane.

Ellis Hospital, Schenectady: James MacFeeters Archibold, Orla James Park, Clarence Fay Rinkle.

Homeopathic Hospital: Loyal Lindsey Dunlop.

Polyclinic Hospital, New York City: William James Carroll.

Mt. Vernon Hospital, Mt. Vernon, N. Y.: Karl Gebhard.

St. Catherine's Hospital, Brooklyn: William Goldhush.

Gouverneur Hospital, New York City: Frederic William Holcomb.

Flushing Hospital, Flushing, N. Y.: Howard Conkling Johnston.

St. John's Hospital, Brooklyn: John Christian Knapp, Earl Charles Waterbury.

Glens Falls Hospital: Francis James Lawler.

Metropolitan Hospital, New York City: Royal Harrison Mayhew, Howard Barton Swan.

St. Luke's Hospital, Newburg, N. Y.: John Williams McKeever.

Nathan Littauer Hospital, Gloversville, N. Y.: Robert Morris Palmer.

Bellevue Hospital, New York City: George Mark Richards.
Cohoes Hospital: Leslie Boyd Seaport.
Lying-In Hospital, New York City: Raeburn James Wharton.
Christ Hospital, Jersey City, N. J.: Jacob Blumberg.
Newark City Hospital, Newark, N. J.: Edward Oscar Boller.
St. Francis Hospital, Hartford, Conn.: William Charles Brons, Edward Leo McDermott.
Casualty Hospital, Washington, D. C.: George William Pullen, Jr.

The Alumni Dinner.

At the banquet in the evening the speakers were: President Lewi, as toastmaster; Chancellor Richmond, Hon. Joseph A. Lawson, Dr. James F. Rooney, Dr. James MacF. Archibold, Dean Blumer and Dean Ordway. Dr. Richmond emphasized the purpose of the Governors of Union University to persist in the elevation of the School to the first rank, and forecast more rigid requirements for admission and higher scholarship. Dr. Lewi pledged the loyal support of the alumni. Mr. Lawson, in his inimitable manner, described the layman's attitude toward the physician. Dr. Rooney spoke for the Committee of Legislation of the Medical Society of the State of New York, and directed attention to the dangers to the profession of indiscriminate legislation. Dr. Archibold, representing the graduating class, referred wittily to the difficulties facing the young practitioner. Dr. Blumer spoke at length of the relations of medical schools to local practitioners, and of the jealousies and disappointments incident to reorganization, which, he said, are general throughout this country. Dr. Ordway explained the increased expense of medical education, and made a plea for endowment, showing that much could be accomplished by gifts of small amounts for scholarships, students' aid or loan funds.

VOL. XXXVII OCTOBER, 1916 No. 10

ALBANY
MEDICAL ANNALS

Original Communications

SCOPE OF PRACTICABLE EXAMINATION IN ROUTINE SCHOOL MEDICAL INSPECTION.

WITH A CONSIDERATION OF STANDARD RECORD CARDS.

Read by invitation before the joint meeting of Sections on Medicine, Public Health and Pediatrics, New York State Medical Society, May 16, 1916.

BY CLINTON P. McCORD, M. D.,
President, New York State Association of Medical Inspectors and Physical Educators; Health Director of Public Schools, Abany, N. Y.

At this particular time, when the possibilities of social uplift and race betterment loom large in the new field of preventive medicine—when the science, medical sociology, is being gloriously born and the public is beginning to realize the value of "keeping well" rather than "getting well," the institution of systems of school medical inspection throughout the country is one of the most gratifying "signs of the times." Mandatory legislation in the increasing number of states enacting such laws has been designed to bring to the smaller cities, villages and rural districts, a measure of the benefits of systematic school health work previously enjoyed only by the larger centers.

THE WORKING UNIT.

The first and most essential thing to determine in a given district is the size of the working staff. The working unit in medical inspection, as recognized by the most practical school hygienists consists of one doctor and two nurses for each three thousand children.

Any district with three thousand school children should employ its physician for "full time." Smaller districts might merge their school health interests to approximate a community of thirty thousand, and join in employing a full-time chief inspector. As this probably can not be realized generally in the very near future, part-time physicians and full-time nurses must be accepted.

An examination of the character indicated in the *health certificate* referred to in the New York State law is practicable only in a physician's office and can not be properly accomplished in less than half an hour. This is the examination that the child undergoes whose parents desire their family physician to make the examination. No space is provided upon the health certificate for a record of tests of eyes and ears, for the reason that the law directs that these tests must be made annually under the direction of the school medical inspector in the case of *all* children.

In most school buildings the only examination room available is the vacant kindergarten room in the afternoon, or the principal's office. Under such conditions the removal of the clothing is not practicable. Besides, a competent examiner will be able to ascertain all facts required for purposes of school medical inspection without removing any clothing except in a relatively small number of cases that may be seen in extra-urban districts on Saturdays or in the late afternoons or evenings at the office for a more detailed examination, at which the parent, or surely the nurse, should be present. This group includes the cases of anemic and poorly nourished children; those with cervical nodes that show a tendency to break down or become confluent; those with chronic cough or digestive disturbances; those that are extremely nervous; or those that suffer from dizziness, shortness of breath, etc.

There is no grave reason why a standard examination, such as the one later outlined, should not be accomplished in a rural school room in case a more suitable room is not available.

In indicating the scope of such an examination it is impossible to divorce ourselves from a brief consideration of:

THE STANDARDIZATION OF SCHOOL MEDICAL INSPECTION RECORDS.

Some difference of opinion exists amongst school hygienists upon this subject. The discussion roughly narrows down to one of two possibilities:

1. A suggested standard card for record of the school medical inspector's physical examination of the child, plus supplementary cards for various special records, reports, etc., or

2. Suggested data essential to scientific conduct of the work, leaving the actual form of the card to the local executives.

The work itself is organized in the various states and in different cities of the same state along different lines and with varying conceptions of the scope of the work. Many of these variations are somewhat fundamental—and are due to a difference in the legislation under which the system is established, the agency entrusted with the administration, or the character of the particular system and working force. Many of these differences doubtless will exist for several years and will be adjusted only as educational hygiene comes generally to be appreciated as a science. However, it seems that standard cards might advantageously be suggested, which cards might at least indicate minimum requirements.

The following cards at least would seem absolutely essential to the proper conduct of school medical inspection in any district:

Physical Record Card.

This card should not be confused with the card for a record of the physical child where a system of physical training exists in the schools. Where such system exists certain anthropometric data are of importance which serve no practical purpose on the physical record card upon which the result of a medical inspector's routine examination of the child is to be entered. Upon this first card of the medical inspector's system of records there should be space for name, date of birth, address, grade, school, father's name, nationality and occupation and date of vaccination of child, and for an abbreviated or code record of the physical condition of the child under the following heads:

Eyes (right and left)
  Glasses? Date obtained.
  Pathologic conditions (this covering squint, blepharitis, fatigue signs, conjunctivitis, etc.).

Tonsils
  Enlarged?
  Cryptic?
  Frequent sore throat?
Nose
  Nasal obstruction?
  Nasal catarrh?
  Chronic pharyngitis?
Teeth
  Decayed?
  Irregular?
Ears
  Defective hearing?
  Discharge?
  Other conditions?
Skin
Orthopedic
Nervous
Cervical Nodes
  Enlarged?
  Confluent?
Nutrition
  Excellent? Good?
  Requiring supervision? Requiring medical treatment?
Mental Status
  Bright?
  Normal?
  Dull?
  Feebleminded?
Incurable defects
Vaccination Scar
Illness since last examination
Remarks
Heart
Lungs

The last two headings may contain no entries in some systems for the reason that the working force may not be sufficient to assure careful examination of the chest. Chest examinations as conducted in some systems are a waste of valuable time. Under these headings there always should be recorded lesions that may be revealed in a more complete examination of the group of poorly nourished, flat-chested, nervous children, and those with enlarged cervical glands that tend to undergo softening. This group of children should receive an intensive examination even in systems where the more superficial examination is the routine procedure. In this way the great majority with cardiac or pulmonary disease will be discovered even in the absence of a large enough working force to handle the more complete examination as a routine procedure.

The physical record card should contain space for the above suggested record for every year of the child's school life, and suitable space for a record of when parents were notified of defects and when results were obtained in the shape of "cure," "operation," "glasses," "treatment," "dentist," etc. This record card should be kept at the school along with the child's school record where it may be consulted with advantage by the principal and teacher.

The examination indicated on such a record card is the most practicable for school medical inspection, since it may be accomplished (excepting in the case of selected children, requiring chest examination) without the removal of any clothing and in a comparatively short time—from six to ten minutes, according to the experience of the examiner, the age of the child, and whether or not there is furnished clerical assistance in the recording of the findings. Space should be provided for a record of results of the most important activity of the school nurse, namely—"follow up" work. Incidentally we should realize that the school nurse stands as the most effective instrument for success in the work either in urban or rural systems. It is poor economy to pay doctors to examine school children and tabulate defects if there is no agency through which correction of these defects may be secured.

Parental Notification Card.

Where a small number of pupils, good social conditions or economy dictated, this card might be used to notify of all conditions found, by simply writing the statement into the blank space. Where there are many notifications to be sent out, however, and where a wide variety of conditions must be dealt with daily, supplementary notification cards are essential. This set may be added to at the discretion of the inspector, so that every case of defect or disease will receive a card, carrying not only the notification of the existence of defect but in addition a definite attempt at the education of the parent upon the subject and a direct appeal for correction.

Miscellaneous Case Card.

This card is a simple and continuous record of so-called " miscellaneous " cases, seen at the time of daily visitation of the schools by nurse or inspector, and disposed of at once in accordance with their immediate need; it would bear the record of the cases of sore throat, acute conjunctivitis, skin diseases, superficial wounds, pediculosis, discharging ears, urgent cases of any of the common physical defects and cases of the acute communicable diseases.

Report of Sanitary Survey.

Where the activities of the medical inspector are properly balanced, his time is not consumed wholly with the examination of children; he gives due attention to the physical conditions under which these children work and live for five hours a day. A card that provides for a record of a sanitary survey under at least the following heads is therefore desirable:

Ventilation.
Air space.
Lighting.
Heating.
Toilet facilities.
Condition of toilets.
Drainage.
Drinking water (individual cups or fountain?)
Rest room for teachers.
Playground facilities.
Aesthetic features.

MEDICAL INSPECTOR'S REPORT BLANK.

With the proper working force and the complete examination of the children and the recording of this data on cards similar to the first one here indicated, the medical inspector should have little trouble in reporting upon the following points:

Number of pupils registered.
Number of schools.
Number of school visits.
Number of hours actually spent examining children.
Number of children examined.
Number of children having:
  Defective vision.
  Other eye conditions.
  Pathologic tonsils.
  Defective hearing.
  Nasal obstruction.
  Poor nutrition.
  Enlarged cervical nodes.
  Decayed teeth.
  Orthopedic defects.
  Nervous conditions.
  Mental deficiency.
  Skin diseases.
  Pulmonary disease.
  Cardiac disease.
  Other conditions.
  Contagious disease since last report (classify).
Number of teachers examined.
Number of teachers with serious defect or disease.
Number of janitors examined.
Number of janitors with serious defect or disease.
Number of sanitary inspections made.
Number of defective children that have received treatment.

This report should be a monthly report from which a yearly summary may readily be made.

School Nurse's Report.

This should include the following:

Number of school visits.
Number of home visits.
  Old.
  New.
Number of miscellaneous cases seen at morning visitation.
  (These may be classified if desired.)
Number of new cases pediculosis.
Number cases pediculosis pending.
  Number cured.
  Number improved.
Number of class-room inspections.
Number of cases taken to dispensaries.
Number of treatments at school.
Number of special investigations.

This should be a weekly report filed in the office of the executive in charge.

Dental Record Cards.

Where free dental service is provided in a district a definite set of record cards is absolutely essential to the proper dispensing of such free service. The Albany set could be used in this line of work in a field of any size.

Physical Training Card

A card for this physical record of a pupil will be needed only where a system of physical training has been established. This card lends itself more readily to standardization, since the data will be largely anthropometric in type. The standardization of such a card might well invite the combined efforts of physical educator and child hygienist. The law requiring physical training in all public schools of New York State will now make this card a necessity.

Open Air School Records.

Where open air treatment of poorly nourished children is provided special cards will be required. The Albany cards provide for a sociological record, a personal term record, a physical examination and a weight chart.

Special Class Records.

If special classes for backward and feeble-minded children are instituted, special cards and blanks will be necessary to scientific work, since this group of children in particular should receive intensive examination and study.

In the majority of places to-day the working unit is too small properly to give all the children adequate care. The proper standardization of working staff and scope of work should perhaps be our first thought. It is of little practical good to require an examination, involving a chest examination, when one part-time man is assigned to four or five thousand children. Such an examination if attempted with this number of children can be but a waste of time. Personally I have seen such examinations conducted in cities that make a great feature of the fact that children are stripped to the waist for their examination; and I have seen such examination completed with four movements of the stethoscope and in less than a minute. Where conditions are such that a part-time man has more than a thousand children a chest examination should not be considered except in the case of the relatively few anemic, flat chested, nervous children and those with suspicious lymph nodes; or those that bring to us evident signs and symptoms of organic heart disease.

However, the standard card, requiring an examination of such scope that the limitations of the inspector in reference to the number of children that he can handle, definitely appear, may point the way to an adequate working unit and may thus help to solve our first problem. A suggested card would thus have a definite educational value.

The following facts, based on the actual experience of a trained examiner of school children, may be suggestive:

Working one-half day (two hours), five days weekly for thirty-six weeks, an inspector may examine approximately one thousand children, if a nurse is present to assist in the preparation and handling of the cases and in the recording of the findings. Working one hour a day for the school year, he will under the same conditions examine approximately four hundred and fifty children. In the same time, the more superficial type of examination (not involving routine chest examination) can be given to three times as many children; and if the nurse is trained to give the Snellen card test, then the doctor can examine four or five times as many, especially after he has acquired mechanical skill in the handling of school children.

Certain standards should be suggested to govern the reporting of defects—as, for example, an enlarged tonsil, smooth and of good color with no history of sore throat, obviously does not require notification; a smaller tonsil, pitted or cryptic, and with a history of frequent sore throat or tonsilitis, is certainly pathologic. Or, a child may read $\frac{20}{30}$ with both eyes and yet may show marked signs of eye strain and should receive the attention of an occulist, while a case properly tested and reading $\frac{20}{40}$ or worse with both eyes, or worse than $\frac{20}{40}$ with one eye, routinely should receive a notification, unless recent glasses from an occulist's prescription are being worn, or, unless corneal opacities account for the lowered visual acuity.

It is thus seen that good fundamental training in the specialties is desirable on the part of the medical inspector if he is to handle his cases wisely. An analysis of the reports of examinations of several thousand school children by one hundred and sixty-seven different family physicians shows a wide range in standards of judgment as to the existence of the various physical defects. Therefore, where school inspection is carried on by general practitioners or doctors without special training in school health work and in handling children, a set of regulations should be formulated for their guidance that should embody a concise discussion of the procedures and standards approved by specially trained and experienced school health workers.

The needs of different communities should be considered in reference to their area, density of population, number of schools, number of children, distance between schools, character of population; and the standards should be based upon the possible equipment for health work; the working unit available; number of doctors and nurses in relation to number of children; whether the inspection law is permissive or mandatory; clinical facilities at hand; money available, etc.

In the amplification of any of the record cards previously suggested or in a consideration of the foregoing items, the opinions of practical workers in this field should be sought. These matters must be considered if the scope of practicable examination in routine school inspection is to be appreciated.

We may now consider such an examination somewhat in detail:

EYES.

The Snellen card test should be given with the child seated twenty feet from the card. Where the distance is less than twelve feet the findings are not reliable. The same might be said of results obtained after three o'clock with natural light on the average winter day. The card should present an absolutely flat surface, should be at the proper level with a dark background, and should be well lighted. The child must not be facing a window or lighted door. The card covering the eye that is not being tested should not touch or press the eye. Children who do not quickly recognize the letters often respond to the chart that bears numbers, but here, too, care must be taken to avoid error, since some children with acute vision who "*know* their numbers" do not recognize them *as printed* on the chart, and therefore apparently do not respond to the test. With these children or with the lower grades, the "illiterate chart" may be used. Even better than this, especially with kindergarten children or with children that are timid and not very responsive, I have found the McCallie cards for testing visual acuity. These cards place the test on the basis of a game and at times are a great aid. The card for near vision and the astigmatic chart may be useful in making a diagnosis more complete in some cases. It is not enough for the family physician who later sees the case to have the child read a paragraph in a newspaper and to ask his mother whether or not he can read the signs on the trolley cars.

The inspector's card usually has been sent after a visual acuity of less than 20-40, in children of most school grades, has been discovered, plus the concomitant symptoms, in many cases, of blepharitis, styes, blurring of print, squint, and frontal headaches. If glasses are worn, the date when they were obtained should be noted and whether they were secured through an occulist's prescription or were purchased direct from an optician. Swollen and thickened lids should be everted and examined with the possibility of trachoma in mind.

EARS.

The " watch test " is perhaps the most practicable. The examiner should have standardized his watch and should so give the test that deception or childish acquiescence to a query is eliminated. There is considerable variation in the response of children at different ages, and only experience in testing numbers of pupils of various grades will bring to the examiner rapidity in arriving at correct conclusions. Discharging ears should be a matter for serious concern, and a home visit in the interests of the child should be made promptly by the nurse.

TONSILS.

Tonsils that are enlarged, ragged and cryptic, especially when there is a history of attacks of tonsilitis or frequent sore throats with absence from school, are pathologic and are surely a menace to the health or even the life of the child. Where the child is under twelve years of age, however, the profession in general, seems about evenly divided as to the wisdom of operative procedure. The medical inspector should adopt some conservative standard to govern his parental notifications.

NOSE.

The medical inspector does not diagnose adenoids. To diagnose adenoids one must use a light and mirror and *see* the adenoid mass, or must run the finger into the pharynx and *feel* it. Either of these procedures is not practicable in school work. He should determine the presence or absence of *nasal obstruction,* and if there is obstruction that appears chronic in character—that is, if it is not the obstruction due to swollen turbinates and the catarrh of a " common cold "—a card of notification should be sent. The family physician at his office may then determine the cause of the obstruction—as spurs, deflected septum, adenoids, etc., and the advisability of referring the case to a rhinologist. The high palate, irregular teeth, mouth breathing, nasal catarrh with eczema of nostrils, dull hearing and general inane facial expression may frequently make the diagnosis of adenoids a safe one, but the inspector's card should read—nasal obstruction—leaving the exact diagnosis and recommendations to the family physician or to his rhinologist.

Teeth.

It is sufficient to note the number of decayed teeth, in particular where the " six year " molars are involved; the presence of green stain, supernumerary teeth, abscesses and marked malocclusion. It is poor economy to employ a dentist to inspect the mouths of school children when we *know* that eighty to ninety per cent. need dental attention, and where a glance at the time of routine medical examination or by a nurse or teacher will locate the pupils who should have treatment. If the services of a dentist are available it is far better to have him devote himself to the actual treatment of the most urgent cases located by inspector or nurse.

Nutrition.

A certain number of poorly nourished, anemic children will be discovered in every school as a result of routine examination. These children should be cared for in open-window class rooms at relatively little expense.

Careful examination of all school children will reveal a small number who have open tuberculosis. Where no provision is made for the care and training of these children they must be excluded from school for the sake of the other children. This means they are frequently forced into conditions that rapidly put them in the incurable class. The school district should make provision, perhaps jointly with coterminous districts, for the care and school training of such children in a special school of the " Pavilion " type, while they are being cured of their disease.

The relation of age to height and weight is of minor importance to the examiner in estimating the nutrition of a pupil. The child is before him and he bases his judgment on something more significant than a few abstract figures which in themselves give him no mental picture of the case in question. For this reason, anthropometrical measurements of school children, while of value where intensive studies of special groups of children are to be made are of no practical value in routine school medical examinations. Even the taking of height and weight involves many dollars of expense in scales and stadiometers, and consumes hours of the inspector's time with no definite or practical result to be achieved. So far as the inspector is concerned, his estimate of poor nutrition must be based upon the pinched, pallid features; the arrested development; the lack of animation and spontaneous activity; the weak and flabby tissues and the signs of nervous exhaustion. Certain definite types soon become fixed in the mind of the examiner who has handled any considerable number of children.

Skin and Glandular.

Under this heading may be noted the presence of enlarged cervical lymph nodes and thyroid swelling. The large number of pupils with enlarged glands sometimes reported by examiners undoubtedly includes the children who have one or more slightly palpable nodes due to nose, throat or teeth defect. The things of importance in these cases are the adenoids, the chronically diseased tonsils or the decayed teeth. The enlarged nodes frequently associated with poor nutrition, those that become acutely inflamed and those that undergo softening are the ones that merit prompt attention.

The presence of any of the eczemas should be noted, since the record will perhaps serve to direct attention to the faulty nutrition, improper diet or digestive disturbances with which these skin conditions are so frequently associated. Any contagious or parasitic skin disorder should also be looked for, and parents should be urged to have treatment instituted at once for any acute or chronic condition from which the child is suffering. In the case of pediculosis a card should be sent, bearing directions for simple home treatment which the school nurse may later demonstrate in case the child's head remains unclean.

Orthopedic and Nervous.

Under this heading may be recorded stoop-shoulders and flat chest; lateral curvature; the chief results of paralysis, rickets and bone and joint tuberculosis. Here also may be noted the condition of "general nervousness," manifested by trembling, tensely held body, quivering eyelids and lips, low jerky speech, twitching of facial muscles, etc., in the irritatable type; and drooping body, shuffling gait, listlessness, inattention, mental dullness, etc., in the apathetic type. Chorea, habit spasm, mental deficiency, the psychic disturbances of adolescence and the emotional instability due to early meningitis or to present epilepsy, should be kept in mind when examining children under this heading.

Miscellaneous.

Here the examiner may record speech defects; congenital defects; and accidental or incurable conditions (for which no notification card is sent).

The Acute Contagious Diseases.

The so-called acute contagious diseases constitute only from one-half to five per cent. of the work in a system of school medical inspection. This is a very important though relatively small part of the work. The finest kind of cooperation should exist between the school medical inspector and the local health officer, where these two offices are not filled by the same man. Where an agreement can be reached as to uniform exclusion regulations in any given district these two officials can supplement one another's work with the result that the great majority of cases of contagious disease will be under proper surveillance and "contact" children will be handled in a manner calculated to protect the larger body of pupils, but at the same time avoid needless loss of school time.

Contagious Skin Conditions

The principal contagious skin conditions from which school children suffer are: contagious impetigo, scabies, ringworm of scalp, ringworm of body and favus. Children with one of these diseases should be excluded from school until they are well under treatment for the condition. If they return before cure is effected it must be with the lesions well covered with some medicament from their doctor or a dispensary, unless the nurse attends to these cases and applies proper remedies under the direction of the inspector from the medicine cabinet that should be installed in every school.

Principal Diseases and Physical Defects of School Children.

This list includes the acute exanthemata; the skin conditions named above, plus the eczemas; simple impetigo and a few rare skin conditions; alopecia areata; trachoma; conjunctivitis (simple and phlyctenular); enlarged tonsils; defective vision; nasal obstruction; enlarged lymph nodes; decayed teeth; goitre; poor nutrition; tuberculosis; chronic pharyngitis; defective hearing; lateral curvature of spine; stoop-shoulders and flat chest; various congenital and incurable deformities; congenital syphilis; chorea; habit spasm; general nervousness; paralysis; epilepsy; nervous disturbances of adolescence; enuresis; general uncleanliness and mental deficiency. A few of these are only symptoms of some underlying cause, but it is usually one or more of the symptoms named that will first bring the child to the examiner's notice. With the above subjects the school physician should be thoroughly familiar.

Another phase of the work that is very important is that which has to do with the health of officials that come in daily contact with pupils under more or less intimate conditions. This matter is covered in part in the school medical inspection law, which provides for the examination by the inspector of teachers and janitors where such examination seems specially indicated. Dr. Thomas D. Wood of Columbia University, probably the leading medico-educationalist in this country, has given the question of the health of teachers much study, and has had an exceptionally wide experience upon which to base his statements. He states that two per cent. of the children are being taught by teachers that are tuberculous and dangerous to the children, as well as being in a condition that unfits them for productive and strenuous service.

Personally I have had some experience with epileptic teachers. The *least* that any school system can demand is that a teacher to begin her service must be in fit physical condition, as certified to by their medical inspector, representing the interests of the school district.

Furthermore, public opinion would undoubtedly uphold any set of officials in the removal of a tuberculous or an epileptic teacher from the school system.

Purposes of School Health Work.

1. To detect and exclude cases of contagious disease, and to prevent epidemics of the same among school children.
2. To help in maintaining sanitary conditions and proper physical equipment in the schools.
3. To detect physical defects and secure correction of these defects through the co-operation of school officials, school nurses, parent, and family or dispensary physician.
4. To aid the Board of Education in passing judgment on the physical fitness of teachers and janitors.
5. To teach practical hygiene in school and home through the agency of the teacher and the school nurse.
6. To make special studies of the physical and mental sides of child life, so that the best ways may be determined for giving the child the training suited to his individual needs.
7. To assist in furnishing to school children scientific physical training and proper recreational facilities.
8. To diagnose mental deficiency.
9. To co-operate with all agencies concerned in the social, moral, mental and physical improvement of the child.

Medical inspectors should familiarize themselves with the details of the above lines of activity as these form the essential background for the practicable routine of any adequate system of health care of school children.

The eighth purpose—the diagnosis of mental deficiency—is a very important function of an efficient system of school medical inspection. Expert examination of school children shows that about two per cent. are of such mental constitution that they can never profit by the work of the regular grades. These children, scattered through the regular classes, are either neglected or punished instead of being studied. They bring to us most of the problems of truancy and incorrigibility, and are a tremendous drain upon the energies of the regular grade teacher. This type of child should not be taught like other children; he requires special care and treatment under conditions suited to his abilities. The educational authorities of many cities are alive to the great need of the proper segregation and training of these cases, not only for their own welfare, but for that of the normal pupils and society at large. The training of such children is a specialty in education, based upon a special psychology plus expert classification and study from a medico-psychological standpoint.

Many physicians, new to the work of medical inspection, have said to me: "I feel that if I am going to do this work I want to do it properly; I don't want to do unnecessary or useless things. I want to get results."

In reply to these statements I believe the best direction is:

1. Read a few good, practical books on the subject. *Health and Medical Inspection of School Children,* by Dr. Cornell (F. A. Davis and Company); *Medical Inspection of Schools,* by Drs. Gulick and Ayers (Survey Associates); *The Hygiene of School Life,* by Dr. Ralph Crowley (Methuen and Company, London); *School Health Administration,* by Dr. L. W. Rapeer; *The Hygiene of the School Child,* by Terman; *Civics and Health,* by William H. Allen (Ginn and Company); *Health in Education,* by McKenzie, are sufficient to present a fair idea of the scope and purposes of the work and recognized methods of administration. Medical inspection, however, cannot be learned wholly from books.

2. Visit some city where a system of inspection of recognized efficiency is in operation. Observe the actual routine administration, and ask questions.

3. Keep in touch with some experienced examiner of school children for some months at least, until the details of your particular system have been worked out to your satisfaction, and you have come to an understanding of the scope and possibilities of your work and have had an opportunity to test your work by the only real criterion—*results.*

4. Be familiar with the latest advances along the various lines of educational hygiene.

5. Keep an open mind; remember there is work enough and glory enough for everyone. Forget not the magic word—*co-operation.*

The spirit of helpful understanding must be abroad. It must stir every individual educator, teacher, physician, dispensary chief, social worker, medical inspector, nurse, dentist and physical educator. If the medical profession as a whole and parents at large awoke to the wisdom of health supervision *prior* to school age, and worked hand in hand with the school and child hygienist, this co-operation would more than double the results of present methods. It would raise the health standard among school children and fulfill one of the vital objects of school training—the bringing of the child to maturity with his powers so developed and his energies so conserved that the richest returns may accrue to the state in its vigorous men and women.

Lord Beaconsfield said: "The public health is the foundation on which reposes the happiness of the people and the power of the country." There is no larger stone in such a foundation than the health of the twenty million school children in this country.

Some Preliminary Suggestions with Standardization of the Work along Various Lines in View.

1. One doctor and two nurses for every 3,000 children.
2. A full-time inspector and two nurses in every district of 30,000 population.
3. Part-time inspectors to be employed for at least two hours daily for the entire school year.
4. If the choice between a full-time nurse or a part-time doctor to initiate the work is imperative, the full-time nurse is the more desirable.
5. The special training of school nurses in addition to the regular hospital course and registration under the laws of their state, and their selection as school nurses on the strength of their credentials and apparent personal fitness as considered by the executive under whom they are to work.
6. Treatment by medical inspector and development of school dispensaries where local clinical facilities are inadequate.

7. The recognition of the fact that the type of examination for purposes of routine work of necessity will be modified by variations in the "working unit," physical equipment, etc., and that standardization of these features must be our first consideration.

8. A careful selection of higher executives in the work in order to insure the propagation of intelligent public opinion and a comprehension of the development of the work along constructive lines.

We must recognize the fact that school health work is far more than putting glasses on children who can not see well, removing adenoids and tonsils, and filling decayed teeth; it involves a wide understanding of the various social, educational and economic problems that are closely bound up with the physical condition of the child. If the administration of school health work does not take cognizance of these various agencies bearing so intimately upon the nature of the physical child in school, then scientific approach to the many-sided problem is not possible and educational hygiene is merely a name.

ADDRESS OF THE PRESIDENT

To the Medical Society of the County of Albany, at the Annual Meeting, May 26, 1916.

By FREDERIC C. CONWAY, M. D.

Mr. Chairman, and Members of the Medical Society of the County of Albany.—I am glad that custom gives me an opportunity to say these few words at the close of my term of office as president of your society. For the past year it has been my duty to preside at your meetings, and conduct them in accordance with the rules of parliamentary law; and, hence, I have had no chance to express my views on subjects of interest to the profession.

During the past year, I earnestly endeavored to arrange for such programs as would make the meetings interesting to the members. The selection of men to read papers was a difficult task, as the limited time compelled me to choose too few of our own members to show the results of their learning and research, and I felt that we really ought to hear from such other leaders of medical thought as would be willing to come from other counties to read papers at our meetings. I made up the program for the whole year practically before the first meeting, and was fortunate enough to suffer only one disappointment. This was when the late Dr. Elsner was prevented by sudden illness from attending the November meeting. In order not to disappoint the members, I, at the eleventh hour, secured local men, two of whom had previously signified their willingness to read a paper at a later date. I understand that I was criticized for this arrangement on the ground that I was indulging in favoritism. This construction of the incident was a false one, and unfair to me.

The attendance, or rather the lack of attendance, at some of our meetings was discouraging. In December, Doctors Sautter and Williams, members of this society, and Doctor Garvin of Raybrook, addressed the society, and the few members that braved the stormy weather certainly were well repaid for their courage. In January, Doctor Elsner, Professor of Medicine at Syracuse University, read a most estimable paper. Unfortunately, there were only about thirty members present to hear him. In February Doctor Holding appeared before us, and was greeted by about the same number of members. The March and April meetings are of such recent date that I need not refresh your memory as to them. It is embarrassing to your presiding officer, and it must be disheartening to your guests, who have traveled from their homes, for the privilege of addressing the society, when there are only a handful of members present at a meeting. The president has to thank the visitor on behalf of the society, and in the next breath he has to give some sickly reason for the poor attendance at the meeting. It is regrettable, but it seems to be the fact that a number of our members have lost the habit of attending meetings; then again, the winter was a hard one, and physicians were extremely busy, and, consequently, tired after the exertions of the day; and, while our meetings provide intellectual recreation, they do not afford the amusement of the kind produced for the " tired business man." I refuse to believe that it is only the possibility of sensational developments occurring at a meeting that is conducive to a large attendance. I sincerely hope that we will be more faithful in attendance in the future.

There are a number of propositions being discussed generally which are of great interest to physicians; some of them are of vital importance to both physicians and laymen. These subjects merit the careful attention and deliberate study of county medical societies.

The matter of fees is usually one regulated by the individual physician. It is peculiarly within the province of a physician to determine the amount of compensation he is entitled to for his work. They should, therefore, stoutly resist any attempt made to fix an arbitrary fee for certain classes of work, regardless of the skill or qualifications of the particular physician. This subject has been brought to the fore with respect to the accident insurance companies acting under the Workmen's Compensation Law. There is considerable dissatisfaction among physicians by reason of the low rates which these companies seek to compel men to accept. No good reason exists why a physician or surgeon should not receive the same compensation for services performed in work of this kind as either would demand from private patients. Naturally, the insurance companies are desirous of expending as little money as possible, and take the chance that physicians, out of professional pride, will do good work for insufficient pay. This abuse can only be remedied by concerted action on the part of physicians, through their county medical societies. Now is the time to vigorously combat this evil.

Another measure of supreme importance to our profession was brought before the Legislature this year. It was known as Senate Bill No. 236, and entitled "An Act to establish a system of insurance to provide benefits for employees in case of death, sickness and accident not covered by workmen's compensation." One reading the title would think that this was a piece of beneficial legislation. The contents of the bill belie the title. It is paternalism run riot. The bill is supposed to be for the benefit of every person employed at manual labor, and all others earning less than one hundred dollars a month, in this

State. The bill provides for the appointment of three commissioners who are vested with power to do as they see fit in carrying out the purposes of the law. In fact, there seems to be no limit to the authority given them. All records are to be secret, and public inspection of them is expressly prohibited. The State is to be divided into districts, no one of which shall contain less than five thousand persons subject to compulsory insurance. The commission organizes in each district a local health or trade health association, and delegates are elected, half of whom represent the employers and half the employees. These people elect a committee of the association of not less than twenty and not more than one hundred members, and the committee elects a board of directors. This board of directors to be composed of not less than eight and not more than eighteen directors, half employers and half employees, is given power to fix salaries, etc., and " make contracts with physicians, hospitals, nurses, dispensaries, pharmacists, institutions and associations and any other persons necessary for the business of the association." Another section says that the carriers, with the approval of the commission, " shall make provision for medical, surgical and nursing aid by duly qualified physicians, surgeons and nurses or through institutions or associations of physicians, surgeons and nurses." Whether this last clause refers to physicians who employ assistants to look after their practices, or is a suggestion that physicians incorporate, I do not know. Between such a commission and such health trade associations endeavoring to carry out the provisions of this proposed law, there would certainly arise an " anarchy of chaos," to borrow a powerful expression of DeQuincey. The measure is as vicious as it is absurd, and could not possibly result in any good to the very people it is apparently intended to benefit. What would become of the great body of physicians under such a system is a matter for conjecture. No class of men are more willing to foster and encourage reforms tending to raise the standards of living and promote the public welfare than physicians, and it is poor requital for their unselfish devotion to the cause of humanity to make them the victims of experiments in socialism. This bill failed of passage, but it will probably come up again, as such weeds grow rapidly and are hard to kill. We should be on the alert to prevent any attempt to pauperize decent people who are not blessed with much worldly goods, and to degrade our profession.

There has been more or less bombast given to the papers lately by men in foreign states as to the very rich and the very poor being the persons that receive the best medical treatment. It is said that all sick people should go to hospitals, and that the poor patients would receive better treatment from the staff physicians than they would if treated at home by regular physicians. This kind of nonsense is responsible for well-meaning people advocating such irresponsible legislation as the "Health Insurance Bill." People generally do not seem to realize and appreciate the fact that while practically every other profession, trade and business has seen substantial increases in compensation, the fees of physicians have remained stationary. Cheap medical treatment would soon be the bedfellow of a high rate of mortality. Physicians are human, and it would be hypocrisy to deny the fact that those who pay the most money in proportion to their means and circumstances receive the best medical treatment, provided, of course, they do not err in the choice of a physician.

At the recent meeting of the Medical Society of the State of New York, the delegates of this society were received with the greatest courtesy. At no time in my memory have our delegates received the attention that they did on this occasion. Our representatives were listened to with the deepest interest by the other members. There was that atmosphere of respectful consideration present in their attitude toward us which is inspired by a reputation for power and influence. Albany County seemed to have again assumed its proper position in the State Society, and it was pleasing to me, and I know it would have been to you, to feel that we were at last considered as representatives of a society that ranks high with other progressive societies, and vies with the New York County Society in influence and importance. It was intimated informally that Albany could have the next annual meeting. This intimation was not well received, as it was considered that Albany was not ready as yet to have this meeting. It would be better to wait and strengthen the society and enhance our prestige so that our Society could control the important committees, and could emulate the records made by the men of a former generation. Two or three years hence, the city of Albany could better accommodate the delegates, and, if at that time we could hold such a meeting as was held at New York and at Buffalo, I think that the State Society would be glad to hold its annual meeting in Albany for some years to come.

A member of this society has represented the State Society in the matter of New York State legislation, and has performed conspicuously valuable service for the allied medical societies. I do not believe that the members of our society appreciate his efforts as much as members of other societies throughout the State. He has been elected to the same office for another year. I would ask the members to take an interest in legislation affecting the profession, and keep in touch with the committees of this society so that the committees can report at each meeting on the bills introduced and explain their meaning. In this way each member will be informed of current measures, and will be in a position to make an intelligent protest against ill-conditioned legislation, and to advocate good legislation, through the medium of his representative in the Legislature.

Reputable physicians are always persons of influence in any community. So far as medical science is concerned, they are supreme. Other matters, while not strictly medical subjects, are of such concern to the public health that physicians should unite and give counsel as to the same, in accordance with their best judgment. This is one of the purposes for which county medical societies were formed.

In a booming city like Albany, new problems arise right along which the society should take cognizance of, and aid in their solution. For instance, the erection of a garbage disposal plant is being agitated; and various organizations have appointed representatives to confer with the city authorities. This society has taken no part in these deliberations, and, unless we bestir ourselves, and have the views of the society expressed by competent and authorized representatives, we will have no voice in the matter. I am not criticizing any committee for sluggishness, as this lack of initiative and diligence is characteristic of the society.

So far as the so-called "Clean-up Week" is concerned, I have no doubt of what the answer of the society would be to a question as to whether it would not be better policy to give the money expended by the city every year for this work to the health department to use in employing good patrolmen to inspect every house and the sheds belonging to them in the city as often as possible, without waiting for complaints, and compel landlords to keep their premises clean and sanitary, than to permit and apparently encourage people to allow filth and débris to accumulate for a whole year, and then dump it onto the sidewalks to be kicked and blown all around the vicinity, filling the air with bacteria.

There is no doubt but that the society should be consulted in the matter of employing physicians for public services when such employment requires particular skill in some branch of medicine. I have in mind the engaging of physicians by county officials to test the sanity of public patients. A man may claim to be an alienist, and be accepted as such by laymen, but that does not mean that his brother physicians in any way recognize his claim. The society could very properly furnish a list of names of men considered competent to do such work.

There are any number of things that we could improve on, or, at least offer suggestions in regard thereto, and make our influence felt. It would not be necessary for us to become hypercritical, and leap from somnolence to pestiferousness. I notice that a progressive paper of the city refers to the possible harmful effect on persons of a nervous temperament of the jarring of dwelling houses caused by the huge auto-trucks that are driven at excessive speed along residential streets; and think that we ought to do what we can to remedy this annoyance, even though it does seem to be a new condition that augurs well for increased business.

The Albany County Society is the first county society in the State that came out in favor of the preparedness propaganda. We were in communication with our representatives at Washington before any other county society took action. Our plea was for an increased personnel in the medical corps of the Army, and the keeping on hand of large supplies of material for use in case of emergency. New York County took action in the matter fully a month after we did. That society was given high praise by the New York *Sun* in an editorial. Apropos of this subject I would urge that we continue our good work, and turn out in a body in the parade to be held next month.

Unfortunately, our society is not regarded with esteem by people generally. It seems to be regarded as an organization composed of physicians, and little is known of it beyond that. Apparently, the people in this county are impressed with the notion that physicians are jealous and envious men who cannot agree on any subject. While this impression is erroneous, still it exists, and should be eradicated. It is grossly unfair to physicians to even think that they are lacking in a sense of honor and justice. One of the reasons why such a notion came into being is due to the fact that in the very few times that physicians appeared before public bodies, the matters in question had not been decided in the society, and disputes arose between the physicians present at the hearings, and scenes similar to ones found in Moliere's comedies were enacted. This procedure is all wrong, and is productive of nothing but ridicule. It is only the opinion of the majority of physicians acting through the County Society that will carry the weight that should be given to our recommendations. Such subjects should be discussed at meetings and men who feel that they are qualified above their fellows to work out these things should be given an opportunity to be heard by the society, so that we can be correctly informed of all the premises in order that true decisions may be reached; and our representatives can then act as spokesmen of the society with full authority. This course would aid those with whom we might confer, as they would feel that they had the moral support of a body of men presumed to know what is best for the public health; and it would also keep out of temptation those who have a weakness for publicity, and prevent the society from being discredited by the ignorance and presumption of unrepresentative members.

If the members of this society will regularly attend the meetings, and enter into discussion of the papers read more freely, and act in harmony, and be fair and honest with each other, we will soon have a society that will be a credit to the city and to our profession. A county society should be a sort of clearing-house for physicians to come to and tell of their aspirations, struggles and grievances; and above all, a place where men can come and give and receive fair and honest criticism. Is it not more honorable and conducive to a feeling of brotherhood to have disputes or misunderstandings fought out or explained, as the case may be, at a meeting of the society, where judgment will be given by your peers, than to maintain a sullen reserve and silence, and resort to backbiting and calumny? There is a clear road ahead of us, and we have no impedimenta to hinder our progress. So far as this society is concerned, factionalism is dead and buried beyond hope of resurrection. No more will any snare and delusion be held before unsophisticated young physicians by reason of which they are led to believe that it is the orthodox thing to do to join some so-called faction. A lack of frankness has been the bane of the Albany medical world. Misunderstandings unexplained soon develop into struggles to encompass the humiliation and defeat of the disputants on one side or the other. The pity of it all is that such affairs result in confusion and discord, and the innocent suffer more than the guilty.

The guiding stars of our society are Truth, Harmony and Co-operation, and as long as we follow the road lighted by these high principles we will never go astray. The interest of one physician is the interest of another, and all should work for the common good. By so doing, we advance ourselves and do greater service for humanity. It is our desire and aim that each man shall be secure in his God-given right to assert his individuality, and that he shall be permitted without fear or favor to be the architect of his own career and to rise as high as his ability and character entitle him. Fortune may decree that his efforts may only bring him a living, or that he may rise to such a position of eminence as was attained by one of our most honored and beloved members, the late Doctor Willis G. MacDonald.

I thank the officers of the society who have faithfully and efficiently performed the duties of their respective offices, and who have co-operated with me in every way to insure a successful administration. I also wish to thank the members of the society for the high honor conferred upon me, and I assure you, gentlemen, that I shall always feel a deep sense of appreciation of your confidence in me.

SOME MANIFESTATIONS OF COLON BACILLUS INFECTIONS OF THE URINARY TRACT.

Read at the Semi-Annual Meeting of the Medical Society of the County of Schenectady, held at Saratoga Lake, June 20, 1916.

By FRANK VAN DER BOGERT, M. D.,
Schenectady, N. Y.

The simple case of colon bacillus infection of the urinary tract in infancy is easy of diagnosis, provided one appreciates the necessity for an examination of the urine in all cases of obscure illness at any age. The diagnosis is based upon the finding of pus and bacteria, which prove upon culture to be the colon bacilli, in a distinctly acid urine, together with severe general symptoms and the absence of any ascertainable organic lesion of other parts which would be sufficient to account for these severe symptoms.

John Thomson of Edinburgh lays stress upon this last point, and mentions cases of tubercular meningitis which he has seen diagnosed as pyelitis because of the presence of pyuria when the pus in the urine was really due to the occurrence of a secondary terminal cystitis.

I have myself seen recently a case of a boy of fifteen months, whose urine showed much pus and colon bacilli, die within less than forty-eight hours of my first visit revealing at autopsy a ruptured appendix.

Prominent among the constitutional symptoms are the temperature which is of the septic type, reaching not infrequently 106° F., chills which are exceedingly rare in infancy except in these infections, and great distress, general hyperesthesia and irritability.

These chills are interesting. Thomson says that one occasionally sees babies suffering from meningitis, pneumonia and other inflammatory diseases, who are said to have shivered at the onset of the fever. He had not, however, up to the time of writing in 1910, seen a baby under two years who was described as having had a real rigor and who had not pus in the urine.

Personally I have never seen a chill in infancy except in colon infections. A case seen during the present month shows the apparent value of the chill in calling attention to the condition.

The illness of a girl baby of fourteen months began with a chill said to have lasted twenty minutes and therefore no doubt a true rigor. The temperature was septic and reached 104 and above. A careful physical examination revealed nothing except a difference in the ear drums, one being apparently markedly congested. The urine was examined twice and no pus was found. The ear drum was punctured on two occasions without obtaining pus, and the temperature continued.

Thirteen days after the onset of the trouble, an aurist suggested that in the absence of any demonstrable organic lesion to account for the symptoms, there was in all probability an infection of the mastoid cells. Operation, however, was deferred.

At this time the patient was catheterized and the specimen showed pus on centrifuging, together with many motile bacteria which proved upon culture to be colon bacilli.

It is hard to understand why pus was not found in the first two specimens of urine examined. It is possible that the urinary infection was a later development, and that the early temperature depended upon the ear condition. It is said, however, that pus is often, perhaps always, absent when the temperature rise occurs, and the chill at the onset was exceedingly suspicious.

A somewhat similar case from a diagnostic standpoint, though without a chill, was one in which a diagnosis of pyelitis was readily made. The condition of the urine responded readily to the alkaline treatment, but with a comparatively clear and alkaline urine the temperature rose to 106, and it seemed that there must be a complication.

There appeared at this time to be a difference in the ear drums and puncture of one drum was advised. The family objected and the temperature dropped within twenty-four hours under continuance of the citrate.

That rise of temperature cannot always be depended upon to draw attention to the disease is shown by the following cases.

A baby of eight months was brought to my office because of refusal to take food and green bowel movements. She was said to be nervous. A doctor had advised weaning two weeks previously, and she was fed regularly. Her weight at birth was seven pounds and at eight and one-half months she weighed but twelve pounds, one ounce. There was marked evidence of loss of weight shown by loss of subcutaneous tissue, the skin lying in folds. The rectal temperature was normal (99° F.).

Pus was found in the urine and she recovered under alkaline treatment, gaining over two pounds in a month.

The baby lived in the country and was seen only at intervals so that the temperature record was incomplete.

Once it reached 101.4°, rectal; the low or normal reading was probably due to lowered resistance because of malnutrition rather than to time of taking.

Another case, which though seen only once daily and therefore also with incomplete temperature, was a girl of one year who showed an elevation of temperature for a few days only, though the pus was present in the urine for some weeks. After the first few days this child was apparently well except for sleepless nights (the temperature was not taken at night and may have been elevated, but there was no evidence of fever apparent to the family).

This baby required large doses of potassium citrate to keep the urine alkaline, at times up to eighteen grains hourly, but when this was accomplished quiet sleep resulted.

The large dose of alkali required to alkalinize the urine is sometimes astonishing, as is the tolerance of babies to the citrate. Occasionally a few grains at two or three hour intervals will be sufficient, at others as much as two hundred and forty grains and more daily may be necessary. Recurrences after discontinuance of the alkali are frequent. One of my cases showed a recurrence of fever after fifteen days of normal temperature.

The presence of colon bacillus in an alkaline urine occurred in one patient, a boy, who died one year after my first visit.

Culture of the urine showed a mixed infection with staphylococcus albus to which the alkalinity of the urine was unquestionably due.

The staphylococcus albus is a gas producing organism and the passage of urine was frequently accompanied by expulsion of gas.

Another fatal case, evidently a pyelo nephritis, died within twenty-four hours of the diagnosis.

A study of these cases leads one to make the following conclusions:

(1) That the finding of evidence of infection of the urine may obscure the diagnosis of a more severe or complicating condition;

(2) That repeated examinations of the urine are at times necessary for the establishment of a diagnosis;

(3) That the temperature does not always drop immediately upon alkalinization of the urine;

(4) That elevation of the temperature cannot always be depended upon to draw attention to the condition;

(5) That these infections may be the underlying causes of malnutrition: refusal to take food, bowel disturbance and sleeplessness;

(6) That colon bacilli may live in an alkaline urine;

(7) That the disease may be fatal if not diagnosed early and appropriately treated.

Catheterization is the only safe method of obtaining the specimen for examination in order to insure against outside contamination.

Clinical and Pathological Notes

Typhoid Fever: A Report of Three Cases Presenting Difficulties in Diagnosis. By Clinton B. Hawn, B. S., M. D., *Instructor in Medicine, Albany Medical College.*

Read at the May, 1916, *meeting of the Washington County Medical Society.*

It is my purpose to present briefly three case histories which were somewhat puzzling, but which illustrate the obstacles at times occurring in the path of the clinician in his attempt to make and verify accurate diagnoses.

First Case:

Male patient, aged 19; illness began about March 7, when patient first noticed a general tired feeling and dizziness. He became easily exhausted at his work and made mistakes at his occupation, which was type-setting. At this time he had three decayed teeth extracted. The gums did not heal and other sores appeared in different parts of his mouth. He had a nose-bleed on one occasion. He then consulted a local physician who found the patient had fever, and suggested typhoid or tuberculosis. The patient was at once sent to the Albany Hospital. He remained there for almost seven weeks. No definite diagnosis was established. At first he was thought to have typhoid fever because of fever, splenic enlargement and rose spots, but three Widals taken early and two blood cultures taken late in the disease were negative. A faint systolic murmur was heard on one occasion and endocarditis was considered. The sputum was negative for tubercle bacilli; urine, negative; white blood count, 6,000 and 10,000

The patient left the hospital May 18, feeling well except for weakness and soreness in the knees. He had night sweats for five or six days after discharge. He remained home one week then went to the country to rest and recuperate. He played at baseball, swimming, etc. When playing ball he seemed very weak and did not regain his former agility. He gained, however, about fifteen or twenty pounds in weight.

The fifth week after leaving the hospital the patient began to lose his previously excellent appetite. He caught a heavy cold, coughed and suffered from headache, nausea, weakness, general malaise and inability to sleep. June 20, he returned to Albany and went to his doctor, complaining especially of pain and weakness in the knees. Fever was found and the patient was advised to return to the Albany Hospital. He did not do this but went to bed at home for a week and re-entered the hospital June 29, feeling in every way worse than when he left the country.

Physical examination on hospital entry showed the following: pulse, 90; temperature, 102°; respirations, 30; enlarged spleen, tympanitic abdomen, rose spots over abdomen and chest; white blood count, 7,000; Widal, negative.

The subsequent history is clinically typhoid fever, the temperature gradually coming down to normal during a period of about four weeks. Widals done on the stock strains of typhoid bacillus at the Bender and State laboratories were persistently negative. During the fourth week a positive Widal was obtained on one culture out of twenty-two, collected from Boston, New York and Baltimore laboratories. Blood cultures were repeatedly made during his hospital stay but were always sterile. During the third week a strain of Bacillus Typhosus was isolated from his stools.

This case presents a classical picture of typhoid fever with relapse, in which the laboratory findings were of little assistance except for the low white count and the positive Widal on one strain out of twenty-two in the fourth week of the relapse.

SECOND CASE:

Male patient, aged 24; entered the hospital September 1 with symptoms and physical signs of arthritis with a definite history of gonorrheal infection about two weeks before. His arthritis cleared up. The urethral discharge varied in amount from day to day, finally disappearing in about ten days. For two and one-half weeks his temperature showed slight irregular variations up to 100.8°. On September 14, 16 and 17, his temperature at 8, P. M., was about 101°. On September 18, it was 103° and thereafter was between 100° and 103° with morning remissions. On September 20 and 23 he complained of headache and began to show considerable prostration and on September 23 typhoid precautions were ordered. Typhoid, gonorrheal septicaemia or multiple abscesses of the prostate were suspected. The pulse was eighty to ninety and his respirations, 20. His white blood count was persistently low: 6,200 to 7,600. Blood cultures and Widals were negative. Finally, on October 6, about twenty days after his first rise in temperature, B. Typhosus was cultivated from his blood.

Clinically he was very ill but no alarming symptoms developed until October 11, when the quality of his pulse became decidedly poor, its rate rapid and his respirations went up to forty. From then on he was continually in a critical condition and finally died, apparently from failure of his heart to withstand the strain. Autopsy showed typical typhoid ulcerations in the small intestine with injection of the lymphoid glands in the mesentery.

This case history is clinically typhoid fever although the early diagnosis was obscured by the existing gonorrheal infection. The laboratory findings were misleading, with the exception of the persistently low white blood count and the late positive blood culture.

THIRD CASE:

Female, aged six years, seen January 17. Past history negative except for an acute appendicitis two years previously, which was operated and abdomen closed without drainage, followed by perfect recovery and excellent health until December 25, when the child appeared irritable and complained of distress in the abdomen. The temperature ranged from 99° to 103°, the pulse varying with the temperature from 90 to 120. Cathartics and enemata gave a temporary relief from abdominal distress, and the abdominal distension, although constant, was less severe. On January 14, the temperature reached 104.8° and from that date to the day of my visit, January 17, varied between 102° and 105°. Repeated Widals were negative. Physical examination showed a well developed and fairly well nourished child, temperature, 105°; pulse, 130; respirations, 35; abdomen somewhat distended and generally tender to palpation; intestinal gurgling could be felt, especially in the right lower quadrant. A few dry rales were heard beneath each clavicle and a questionable dullness was elicited low down in the right chest, especially posteriorly. Breath-sounds seemed to be diminished over this area. An exploratory needle was introduced in the eighth intercostal space, posterior axillary line, but no fluid obtained. The heart sounds were normal; reflexes, normal; no spinal tenderness, no Kernig, white blood count, 8,000; Widal, negative; urine, negative.

In the following four days, the symptoms were unchanged. On January 21, the temperature dropped to 96.2° and remained subnormal for three days. From that time on there was an uneventful convalescence, the little patient rapidly regaining perfect health. On January 20, a Widal was positive but subsequent Widals were negative, or slightly suspicious.

This case presents one feature which differs from the classical story of typhoid fever: namely, the recovery by crisis instead of lysis. This, however, is not unheard of, various authorities having reported such an occurrence, although it is admittedly rare. The clinical history of the case up to the crisis was typical of typhoid fever. The white blood count was low, again being the only laboratory finding which was of any assistance in the diagnosis, as the one positive Widal may be ruled out as a laboratory error. The abnormal dulness in the right chest was undoubtedly liver dulness displaced upward by a distended abdomen, the entire history of the case presenting no other chest symptoms of any importance.

In the diagnosis of typhoid fever the clinician is aided, as in many of the diseases, by laboratory methods, and considering the many variations in symptoms and physical signs which typhoid fever may present clinically, the laboratory tests are especially welcome. The average case of typhoid, however, presents a fairly clear picture and the laboratory tests are applied merely for the sake of obtaining confirmatory evidence.

The cases just presented were selected because of their variations from type and not with the desire to discredit laboratory methods. The physician in assembling data for a diagnosis is ever cognizant of a certain amount of inaccuracy in the physical signs obtained by inspection, palpation, percussion and auscultation but he is quite apt to accept the laboratory test as infallible, forgetting that laboratory methods are quite as prone to inaccuracy as any other procedure.

From the standpoint of laboratory findings, the one examination which proved reliable in all three cases was the white blood count. This is of interest, as a leucopaenia was one of the earliest laboratory findings proven constant in typhoid fever. I believe it still is the most reliable of all the tests at our disposal in the diagnosis of uncomplicated cases.

The agglutination power of the patient's blood serum is apt to be quite specific for a definite strain of typhoid bacillus and we may therefore obtain negative Widals with the typhoid strains on hand in any one laboratory, while the one specific strain would give a positive reaction. This is illustrated in the first case presented, where a specific strain of typhoid bacillus was obtained only after trying out a considerable number of cultures. The total number of distinct strains tried out in this case was considerably less than the total number of cultures, due to the practice in laboratories of borrowing cultures from one another, with the result that the cultures from one laboratory may have their source from those of another, although located in a distant city.

The blood culture, using a suitable medium, containing bile, should give fairly constant results early in the course of the disease, but the difficulties encountered in its technique, even in experienced hands and with the essential close proximity of the laboratory, render its results quite variable. In only one of the two cases presented in which blood culture was done, did we succeed in isolating the typhoid bacillus and that, rather late in the disease.

In conclusion I would say that the physical signs and laboratory findings in typhoid fever are varied by the individual characteristics and reactions of the patient, just as they are in any other disease. Diagnosis is made on an individual plus a disease and not on an abstract disease, and must be formulated by a careful balancing of all the findings, remembering that no one finding should be given a preponderance of weight over the others unless its reliability and specific value is unquestionable. We can not expect our patient to always present all the classical symptoms enumerated by the text books.

Editorial

> Her sister, the Marquesa de Juluapa, lately dead, is said to have been also a woman of great talent and extraordinary conversational powers; she is another of the ancient noblesse who has dropped off. The physician who attended her in her last illness, a Frenchman of the name of Plan, in great repute here, has sent in a bill to her executors of ten thousand dollars, which, although it does not excite any great astonishment, the family refuse to pay, and there is a lawsuit in consequence. The extortions of medical men in Mexico, especially of foreign physicians, have arrived at such a height, that a person of moderate fortune must hesitate before putting himself in their hands. A rich old lady in delicate health, and with no particular complaint, is a surer fund for them than a silver-mine.
>
> *Life in Mexico.* MADAME CALDERON DE LA BARCA.

✠ ✠ ✠

A Perfected Organization. The separation of hospital services into surgical and medical was recognized even before the science of surgery developed into the excellence of the present day, and may be regarded as permanently established. Other departments, as of gynecology, obstetrics, ophthalmology, touch upon either of the grand divisions at points, but may be administered as subordinate and without invasion of any fundamental principle. But in all there is demand for every approved method of diagnosis and treatment, and a large array of pertinent facts has been opened by the revelations of the microscope. Chemical and physiological discoveries have contributed their part to the explanation of pathological conditions. All these resources must be utilized by the clinician, who is no longer content with what he may find by the unaided eye, ear or finger. It is often necessary that several physicians of special training unite in the examination of the patient: and it is inevitable that resort should be had to the clinical laboratory. For this perfect service the hospital affords the best and most complete establishment. Specialists meet there in routine duty, and the laboratory may be relatively easily organized. Unfortunately the opportunity is not always taken, and practicing physicians in some communities have been forced to organize for cooperative " team work."

It is to be regretted that our own Albany Hospital has been somewhat tardy in recognition of this requirement for precision in the study of cases; and none the less gratifying that correction of this fault is in process of realization. A special committee of the staff has submitted a report to the Board of Governors, urging the organization of a clinical and pathological laboratory. The recommendation has been approved, and plans are being carried out. The former nurses' house, one of the original pavilions, is undergoing reconstruction to this end. Rooms upon the third floor are to be adopted, so that there shall be a stock room, a receiving room for specimens, a laboratory for the medical service, one for the surgical service, a dark room, and three rooms for the needs of a general chemical, pathological, and physiological laboratory. Of as great or greater importance than the housing of this new department, however, is its organization. It is proposed that its direction shall be imposed upon a representative of the attending staff, who shall advise the routine clinical examination made by assistants of the house physician and house surgeon, respectively. An exactly designated service will be completed by the appointment of a supervising laboratory nurse, who is to be carefully instructed in the details of collecting specimens, preparation for blood culture, and special diagnostic and therapeutic procedures. The relations of a nurse with the work insures proper correlation of the clinical with the laboratory work of the hospital.

The cost of this innovation should not be large, as the close association of the hospital with the college assures the cooperation and advice of the professors of physiology, chemistry, pathology and bacteriology and their assistants, whenever pertinent questions arise.

There will thus appear a new department of the hospital, independent and a unit, and yet subordinate and associated with all the others. It speaks for exactness, and will have far-reaching effects upon the efficiency of the institution.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, JULY, 1916.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	15
Typhoid fever	0
Scarlet fever	0
Measles	0
Whooping cough	1
Diphtheria and croup	0
Grippe	0
Diarrheal diseases	12
Pneumonia	4
Broncho-pneumonia	3
Bright's disease	13
Apoplexy	16
Cancer	14
Accidents and violence	13
Deaths under 1 year	16
Deaths over 70 years	26
Total deaths	156
Death rate	16.69
Death rate less non-residents	14.12

Deaths in Institutions.

	Non-Resident.	Resident.
Albany Hospital	7	17
Albany Hospital Camp	3	6
St. Peter's Hospital	2	1
Homeopathic Hospital	4	8
Maternity Hospital	0	1
St. Margaret's House	1	1
Home for the Aged	2	2
Hospital for Incurables	0	2
Orphan Asylum	1	0
Albany County Hospital	1	0
Public places	2	2
	23	40

Births	184
Still births	3

ABSTRACT OF VITAL STATISTICS, AUGUST, 1916.

COMPILED BY WILLIAM F. FULGRAFF, REGISTRAR.

Deaths.

Consumption	22
Typhoid fever	1
Scarlet fever	0
Measles	0
Whooping cough	1
Diphtheria and croup	0
Grippe	0
Diarrheal diseases	4
Pneumonia	2
Broncho-pneumonia	4
Bright's disease	13
Apoplexy	7
Cancer	11
Accidents and violence	13
Deaths under 1 year	25
Deaths over 70 years	25
Death rate	16.91
Death rate less non-residents	14.45

Deaths in Institutions.

	Non-Resident.	Resident.
Albany County Hospital	1	3
Home for the Aged	0	3
Hospital for Incurables	3	0
St. Peter's Hospital	2	5
Maternity Hospital	0	5
Albany Hospital Camp	4	3
Albany Hospital	4	12
Homeopathic Hospital	5	16
Dominican Convent	0	1
St. Ann's School of Industry	1	0
St. Margaret's House	2	0
Public places	1	4
	23	52

Births	202
Still births	9

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	20
Scarlet fever	3

Diphtheria and croup	7
Chickenpox	2
Measles	1
Whooping cough	8
Tuberculosis	51
Mumps	11
Dysentery	4
Anterior poliomyelitis	1
Total	108

Number of days quarantine for scarlet fever:

Longest...... 38 Shortest...... 30 Average...... 31⅓

Number of days quarantine for diphtheria:

Longest...... 30 Shortest...... 10 Average...... 25¼

Fumigations:

Houses.................. 24 Rooms.................. 118

Milk bottles disinfected.................. 156

TUBERCULOSIS.

Living cases on record August 1, 1916		583
Cases reported:		
By card	45	
Dead cases by certificate	6	
		51
		634
Dead cases previously reported	16	
Dead cases not previously reported	6	
		22
Living cases on record September 1		612

Total tuberculosis death certificates filed during August, 1916	22
Non-resident deaths:	
Albany Hospital Camp	4
Resident deaths	18

Visits to Cases of Communicable Disease.

Tuberculosis	8
Diphtheria	3
Infantile paralysis	4
Total	15

Physicians visited	18
Inspections of playgrounds	11

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	8
Initial negative	127
Release positive	5
Release negative	41
Suspicious	3
No growth	2
Total	186

Test of Sputum for Tuberculosis.

Positive	11
Negative	30
Total	41

Widals.

Positive	19
Negative	44
Suspicious	14
Total	77

Wassermann tests	101
Water analyses	1
Milk analyses	13

BUREAU OF NUISANCES.

Complaints made	173
Inspections	160
Plumbing	59
Sanitary	101
Reinspections	210
Plumbing	45
Sanitary	165

Hearings.

Cases heard before Health Officer	23

Disposition of Cases.

Abated	18
Ordered for reinspections	5

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	220
Old houses	69
New houses	151
Permits issued	137
Plumbing	110
Building	27
Plans submitted	47
Old buildings	13
New buildings	34
Houses tested	83
Blue or red	1
Peppermint	2
Water tests	80
Houses examined	49
Re-examined	90
Valid	30
Without cause	19

DEAD ANIMAL REPORT.

Horses removed	27
Dogs removed	265
Cats removed	606
Chickens removed	1
Total	899

BUREAU OF MARKETS AND MILK.

Public market inspections	7
Market inspections	14
Fish market inspections	1
Milk depots inspected	8
Milk cans inspected	270
Milk cans condemned	5
Milk houses inspected	57
Dairies inspected	57
Cows examined	689
Cows quarantined	5
Lactometer readings	87
Temperature readings	87
Fat tests	34
Sediment tests	128
Chemical tests	21
Bacterial counts	21
Complaints investigated	3

MISCELLANEOUS.

Cards posted for contagious disease	10
Cards removed	10
Notices served on schools	0
Notices served on factories	2
Notices served on stores	1
Postal card returns sent to doctors	11
Postal card returns received from doctors	11
Inspections and reinspections	25
Work certificates issued to children	18
Vaccinations	9
Cases assigned to health physicians	64
Calls made	142
Garbage collected from 1st district, barrels	625
Garbage collected from 2nd district, barrels	469

Medical News

Edited by Arthur J. Bedell, M. D.

AMERICAN SCHOOL HYGIENE ASSOCIATION AND CHILD HYGIENE SECTION OF NATIONAL EDUCATION ASSOCIATION AND THE AMERICAN POSTURE LEAGUE. —The meeting of this Association was held from July 4 to 8 in New York City when the program included a discussion on Physical Education and Military Training, The Occurrence of Preventable Accidents, Fire Drills, Control of Medical Diseases pertaining to the condition of training activity, and many other papers of considerable interest to those doing this special work.

AMERICAN ASSOCIATION FOR PREVENTION OF INFANT MORTALITY.—The seventh annual meeting of the American Association for Study and Prevention of Infant Mortality will be held in Milwaukee, Wisconsin, October 19-21, 1916.

PLATTSBURG MEDICAL MILITARY CAMP.—There have been two training camps for medical men held in connection with the Plattsburg Military Camp. The Camps were commanded by the Medical Officers of the regular army and physicians who have attended them state that they were of considerable value.

INFANTILE PARALYSIS IN THE STATE OF NEW YORK.—The August Bulletin of the State Department of Health states that there were 336 cases reported during the month of July, up to the 29th, and that these cases were widely separated throughout the State. An analysis of 121 cases, in which special data has been received, shows that sixty-nine patients were males and fifty-two females. About one-half of the children were of American parentage. Data respecting the sanitary conditions of the homes indicate that conditions were bad in thirty-five instances; fair in thirty; good in thirty, and excellent in twenty-four.

Third District Branch, Medical Association, State of New York.—The annual meeting of the Third District Branch was held in the High School building at Cobleskill, Tuesday, September 26.

The business meeting was held at 10:30 a. m.

Scientific program: Address by the President, Dr. A. H. Traver of Albany, N. Y.

Address by the President of the Medical Society of the State of New York, Dr. Martin B. Tinker, of Ithaca.

Dr. Augustus B. Wadsworth, of Albany, read a paper on "Infantile Paralysis," which was discussed by Dr. H. C. Gordiner, of Troy.

Dr. W. T. Shields, of Troy, read a paper on "Infective Arthritis."

At 1:00 p. m. the Schoharie County Medical Society gave a dinner to the members on the Fair Grounds, and at 2:00 p. m. the visiting members and their guests were entertained at the Schoharie Fair by the Fair Association.

Conference of Charities and Correction.—Seventeenth New York State Conference of Charities and Correction will be held in Poughkeepsie, November 14, 15, 16, 1916.

New York and New England Association of Railway Surgeons.—The twenty-sixth annual session of the New York and New England Association of Railway Surgeons will be held at the Hotel McAlpin, New York City, on Wednesday, October 18. 1916. A very interesting and attractive program has been arranged. Dr. Wm. S. Bainbridge will deliver the "Address in Surgery," on the Cancer Problem. Railway surgeons, attorneys and officials and all members of the medical profession are cordially invited to attend.

The Regular Meeting of the Medical Society of the County of Schenectady was held Tuesday evening, September 12, 1916, at 8:30 o'clock.

Thomas Ordway, M. D., of Albany, N. Y., read a paper on "Certain Phases of Clinical Cardiac Physiology."

Frank Vander Bogert, M. D., of Schenectady, N. Y., read a paper on "Some Manifestations of Colon Bacillus Infection of the Urinary Tract in Infancy."

Higher Entrance Requirement.—An official communication states that the New York University has authorized the medical department to increase its requirement for admission to two years of college work beginning with the session of 1918-1919.

Red Cross Hospitals.—The New York County Branch of the American Red Cross having received gifts amounting to the $50,000 necessary, has placed orders for the equipment of two military base hospitals in New

York City. Each hospital will be equipped with 500 beds. Three full staffs of surgeons, nurses and orderlies have already been organized for base hospitals and efforts are being made to cover the equipment of the third hospital.

Social Insurance Inquiry.—Under the auspices of the committee on insurance of the New York Chamber of Commerce arrangements are being perfected for a comprehensive investigation into all essential phases of the subject of social insurance, between this and the next meeting of the New York legislature, with special regard to health insurance. Dr. J. F. Crowell, executive officer of the Chamber of Commerce, to whom communications may be addressed, will have charge of the inquiry.

It is the purpose of this committee to go extensively into the subject so as to have at hand the desired data and to avail itself of the gist of experience in this and other countries. This inquiry will extend not only to the actual developments in countries where health insurance has made some progress, but is intended also to include a critical examination of the conditions, causes and effects of the different systems with a view to their availability for American communities. It is intended to test the claims which existing systems made at the time of their origin in the light of results.

Medical Corps of the Navy.—The next examination for appointment in the Medical Corps of the Navy will be held on or about October 23, 1916, at Washington, D. C., Boston. Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston. S. C., Great Lakes (Chicago), Ill., Mare Island. Cal., and Puget Sound, Wash.

Applicants must be citizens of the United States and must submit satisfactory evidence of preliminary education and medical education.

The first stage of the examination is for appointment as assistant surgeon in the Medical Reserve Corps, and embraces the following subjects: (a) anatomy, (b) physiology, (c) materia medica and therapeutics, (d) general medicine, (e) general surgery, (f) obstetrics.

The successful candidate then attends the course of instruction at the Naval Medical School. During this course he receives a salary of $2,000 per annum, with allowances for quarters, heat, and light, and at the end of the course, if he successfully passes an examination in the subjects taught in the school, he is commissioned an assistant surgeon in the Navy to fill a vacancy.

Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.

PERSONALS.—Dr. A. F. HOLDING (A. M. C. '01). has removed from Park Ave., New York City, to 53 W. 50th Street.

—Dr. RUFUS CRAIN (A. M. C. '13), after having been with Dr. Andrew MacFarlane, of Albany, for some time has opened an office at Richfield Springs, N. Y.

—Dr. JAMES S. LYONS (A. M. C. '15), after serving a year as resident in the Albany Hospital, is now affiliated with Dr. Thomas Ryan of 74 Swan Street.

—Dr. ALSON J. HULL (A. M. C. '13), of Troy, late of the 23rd Infantry of Brooklyn, has been honorably discharged.

DEATHS.—Dr. J. SEWARD WHITE (A. M. C. '80), died at his home, South Glens Falls, June 19, 1916.

—Dr. ADAM J. BLESSING (A. M. C. '86), of Albany, died at his summer home at Sacandaga.

MARRIED.—Dr. C. L. NICKOLS (A. M. C. '15), of Philmont, and Miss Carrie L. Hasbrouck of the same place were married July 21, 1916.

In Memoriam

ADAM J. BLESSING, M. D.

Dr. ADAM J. BLESSING, an alumnus of the Albany Medical College in the class of 1886 and a physician of large practice in Albany, died at his summer home at Sacandaga Park, N. Y., on August 6, 1916.

Early in life Dr. Blessing had some symptoms of tuberculosis, which became quiescent, and he was for many years vigorous and energetic. A short time before his death he manifested symptoms of Addison's disease, although it was not generally known when he left for his summer home that he was in any way in poor health. The symptoms developed rapidly, and the fatal termination came as a surprise to his friends.

Dr. Blessing was born in Albany, and was in his fifty-third year. He received his early education in the public schools of this city. He was a member of St. Paul's Episcopal Church, and was prominently identified with many local clubs and fraternities. He was a member of Ancient City Lodge, No. 452, F. & A. M., and of the Masonic Veterans' Association. He is survived by his wife, one daughter and one son.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Simplified Infant Feeding: with seventy-five illustrative cases. By ROGER H. DENNETT, B. S., M. D., Adjunct Professor of Diseases of Children. N. Y. Post-Graduate Medical School. With 14 illustrations. J. B. Lippincott Company, Philadelphia and London. The price of this book is $3.00.

The object of the work as stated by the author in the preface is to "tell the busy practitioner just how to feed the different babies with whom he comes in contact day after day."

The author's method consists in the use of simple whole milk, water and sugar mixtures, keeping in mind three main points; first, the proper elements to maintain nutrition and to allow growth; second, it should be digestible; and, third, it should contain the proper quantity of food, which is best estimated by caloric standards.

A pleasing feature of the book is the "Synopsis of Text" in the first chapter. The reader can thereby obtain a logical grasp of the method advocated by the writer, and the book as a work of reference is greatly enhanced.

H. D. C.

International Clinic. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery and the Specialties, also Other Topics of Interest to Students and Practitioners. By leading members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, M. D., Philadelphia. Vol. III, 25 Series, 1915. Published by J. B. Lippincott, Philadelphia. The price of this book is $2.00.

No better illustration of the great latitude of medical literature can be afforded than to pick up a volume of the International Clinics. Every man can find therein the subject in which he is most interested, also he has attractively presented those borderland subjects which it is profitable for all alike to peruse thereby broadening their general knowledge and sympathy.

Such an essay is that written by Bernard Glueck, M. D., Washington, D. C., entitled "The Malingerer: A Clinical Study." The article itself is worth the price of the book. No one can read the monograph without experiencing a deeper sense of sympathy for the poor unfortunates of mental disease who are driven in despair to this means of self-accusation—a mental rather than moral defect.

The volume in question came into the hands of the reviewer while on a tour of medical duty, attached to a Field Hospital, part of Pershing's Punitive Expedition, "Somewhere in Mexico." It afforded interesting reading not only to the writer but also to his fellow medical officers in the service of the U. S. Army.

H. D. C.

NEW YORK STATE MEDICAL LIBRARY.

Edited by Frances K. Ray.

From October to May, inclusive, the Medical Library will be open daily (except Sundays) from 9 A. M. to 6 P. M. and Tuesday and Thursday evenings.

Recent Accessions.

Appleton's medical dictionary. 1915.
Ashby. Infant mortality. 1915.
Boyce. Health progress and administration in the West Indies. 1910.
Brackett. Care of the teeth. 1915
Broadhurst. Environmental studies of streptococci. 1915.
Chicago ophthalmological society. Symposium on the extraction of senile cataract. 1911.
Cullen. Collected reprints. Vol. 2. 1916.
Cullen. Embryology, anatomy and diseases of the umbilicus. 1916.
Eliason. First aid in emergencies. 1915.
Ferguson. Non-surgical treatment of intestinal stasis and constipation. 1916.
Grotjahn. Gerburten-Rückgang und Geburten-Regelung. 1914.
Guyer. Being well born. 1916.
Havard. Manual of military hygiene. 2d ed. 1914.
Hill. The new public health. 1916.
Knox. Radiography, X-ray therapeutics and radium therapy. 1915.
Krogh. Respiratory exchange of animals and man. 1916.
Munson. Theory and practice of military hygiene. 1901.
National association for the study and prevention of tuberculosis. Tuberculosis directory. 1916.
New York dermatological society. Constitution and by-laws: 1869-1916.
Rockefeller institute for medical research. Studies, v. 24. 1916.
Scott. Elementary materia medica for pupil nurses. 3d ed. 1913.
Stanford university medical publications. Bulletin no. 3. 1915.
Tuberculosis yearbook and sanatoria annual, v. 1, 1913-14.
Wood. System of ophthalmic surgery. 2 vols. 1911.
Wood. System of ophthalmic therapeutics. 1911.
Woodhull. Military hygiene for officers of the line. 4th ed. 1909.
Wooley. Clinical history in outline. 1914.

Periodical Sets Completed.

Berliner klinische Wochenschrift.
Journal of comparative neurology and psychology.
Pediatrics.

New Current Subscriptions.

Journal of bacteriology.
Journal of immunology.
Journal of the Royal army medical corps.

VOL. XXXVII NOVEMBER, 1916 No. 11

ALBANY
MEDICAL ANNALS

Original Communications

THE MODERN MEDICAL SCHOOL: ITS RELATIONS TO THE HOSPITAL AND TO THE MEDICAL PROFESSION.

Address Delivered at the Eighty-fifth Annual Commencement of the Albany Medical College, June 9, 1916.

BY GEORGE BLUMER, M. D.,
Dean of the Medical School of Yale University

At the present time medical education in the United States is going through a period of development which involves perhaps greater changes than have occurred in any similar period in the past. The development which is taking place has been due to several factors, some external, some internal. The most important of the latter is the pressure from within the profession itself, notably the efforts which have been made by the Council on Medical Education of the American Medical Association. The work of the Carnegie Foundation for the Advancement of Teaching, as presented in the reports of Mr. Abraham Flexner on Medical Education in the United States and in Europe, has also had a far reaching influence. These reports point out the deficiencies in American medical education and make clear the advantages and disadvantages of the various European systems. But, after all, the factors which have resulted in the greatest changes in our conception of a sufficient medical education are those which have grown out of the advancement of knowledge in the sciences underlying medicine, with the resultant changes which are occurring in the practice of medicine. It may not be out of place to discuss here in some detail the more important factors which have led to our changed conception of the methods and aims of medical education.

It is not necessary to go back for a period of more than a generation to reach a time when almost the entire laboratory instruction in medical schools was in Anatomy and General Chemistry. Indeed, it may truthfully be said that a generation ago there were not more than half a dozen medical schools in the United States in which Anatomy was taught by a full time professional anatomist, and not more than an equal number in which the Chemistry taught was anything more than the most elementary clinical Chemistry. At the period mentioned, all of the chairs in American medical schools, with few exceptions, were occupied by practitioners of Medicine whose chief source of livelihood was their practice, and whose medical teaching was a secondary consideration. I do not mean to infer by this that the teachers of this period were neglectful of their duties, for indeed there were many of them who conscientiously attended to them, often with considerable self-sacrifice; but the conception of adequate medical teaching in those days was such that it was possible for a busy practitioner, by devoting one or two hours a day to his medical school work, to satisfy the reasonable demands of the time.

The closing years of the nineteenth century and the beginning of the present century were marked by two changes in connection with the so-called pre-clinical sciences; one which concerned the subjects themselves, the other having to do with the methods of teaching them. During the period mentioned, certain of the older sciences developed with great rapidity and some newer ones obtained general recognition, and even gave rise to offshoots of their own. Anatomy extended its field of action from the realms of morphology to those of experimental cytology and embryology. Physiology developed to such an extent that it was necessary to separate its physical aspects from its chemical ones. Physiological chemistry, which thirty years ago was taught in not more than two or three American medical schools, became an essential department of all well-equipped medical schools. The methods of physical and nervous physiology were widely developed and, together with those of physiological chemistry, invaded with increasing prevalence the field of clinical medicine. Pathology, originally confined to the dead house and the laboratory of pathological histology, invaded the field of function and experimental pathology was rapidly developed. The application of physiological methods to the study of curative agencies gradually built up the science of pharmacology, and it is to a branch of this—experimental chemotherapy—that we are indebted for remedies like Salvarsan and other synthetically prepared drugs, Bacteriology became increasingly important, and its daughter science immunology now bids fair to outgrow its ancestor. This bare recital must make it clear that in the sciences which are taught in the first two years of the medical course an increasing complexity, necessitating increasing specialization, appeared with startling rapidity. It was this increasing growth and complexity in the pre-clinical sciences which led to the second change, namely, the conception that it was no longer possible for general practitioners to satisfactorily teach the scientific studies of the first two years of medicine.

It was not without a struggle that the medical schools of the United States accepted the view that the subjects above mentioned must be taught by experts who devoted their whole time to them, but this idea is now so deeply rooted that no one would care to challenge it and, indeed, the opposition to it which occurred at the time it was being put into effect was largely an opposition to the expense rather than an opposition to the principle. The necessity for the equipment of proper laboratories in anatomy, physiology, physiological chemistry, pharmacology, pathology and bacteriology, together with the expense of manning them with full time teachers and technicians, and supplying them with proper annual budgets, is one of the factors which has made medical education today the most expensive form of technical education, and has made it utterly impossible to conduct an efficient medical school on the income derived from the fees of students alone.

The tremendous strides which have been made during the past generation in the medical sciences could hardly have occurred without being reflected in medical practice. As chemical, physical and physiological methods have developed in the experimental laboratory, it has been a perfectly natural step to endeavor to apply them and the knowledge which has been experimentally gained through them to the solution of the practical problems of disease. It can be safely said that there are any number of scientific principles still awaiting their application to clinical problems, for the sciences have traveled so fast that the very limited number of properly trained clinicians has been unable to keep up with them. It is no exaggeration to say that the developments of the past thirty years have been such that the type of clinician now being turned out by our better institutions is a completely different individual in training and in point of view from the clinician of a generation ago. The advanced clinician of the present day must be able not merely to interpret the results of examinations made with his unaided senses and such simple instruments as the stethoscope, he must also be competent to grasp the principles of a variety of chemical and serological reactions, he must be familiar with the devices of the physiological and physical laboratories as applied to the study of disease, and he must be able to correlate the results obtained. If he is to be a competent teacher he must have spent years in getting a thorough grounding in the medical sciences, he should be an expert in at least one of them, and he should be able to intelligently discuss the bearing of all of them on the problems of disease.

It must be realized, too, that the changes discussed have altered very largely the teaching methods of the medical schools so that the stress now falls on the practical rather than on the didactic method. From the point of view of the teacher the laboratory method, the seminar, the public health excursion, the teaching of operative surgery on the lower animals, and similar practical procedures, have added greatly to the work of instruction, and have been one of the factors calling for a change in the character of the teaching force. Moreover, as more and more medical schools and hospitals have become really structural parts of universities, the idea that research is one of the functions of such institutions has become firmly rooted, and research involves both special training and ocnsiderable expenditure of time.

It should, I think, be apparent from the preceding statements that the time has come when not only the teaching of the medical sciences but also at least a part of the teaching of the practical branches of medicine must be in the hands of men who devote their main energy to the work. Just as it was discovered a generation ago that increasing specialization had made it necessary to employ full time teachers in the medical sciences, so we are now going through a period of development in which an attempt is being made to apply the same principle to the teaching in the clinical departments. The proposed system which is now most prominent, frequently discussed under the name "Full Time Clinical Professorship," has, as might be expected, met with considerable opposition, not merely because it involves the application of a new principle to a group of studies which have hitherto been treated on an entirely different plan, but also because to a greater degree than was the case with the teaching of the medical sciences it replaces a system involving an hitherto privileged class, namely, the practitioner teacher of the clinical branches.

In order to fully understand some of the drawbacks of the system of clinical instruction now generally in use, it is necessary to examine the workings of the clinical professorship. These may be very briefly described by stating that the contact of the clinical teachers with thestudents of the school usually results in the building up of a widely ramifying consultation practice. To use the language of the street, the old students of the clinical professors act as "feeders" to their consulting practice. While, no doubt, such a system is a natural and in many respects a legitimate development, it is one which is capable of abuse. Few who have tasted of the sweets of consultation practice care to eschew them. The effect upon the teaching capacity of the clinical professor is, however, usually most unfortunate. The successful clinical teacher under this system usually has the misfortune to be so swamped by remunerative consultation work that he is no longer capable of satisfactorily carrying on the educational side of his career, and as the clinical sciences have become more and more complex his inability to cope with the increasing demands of his hospital and teaching work has become more and more apparent. As a result of these conditions there has arisen among a certain group of medical educators a demand that at least the more important clinical departments, like medicine, surgery, obstetrics and pediatrics, shall be in charge of specially trained men who shall devote their whole time to the teaching work of their departments and the hospital and research work involved therein, shall sharply limit their consultation work, and shall turn over such consultation fees as they may earn to the institution. I am firmly convinced that the principles underlying this suggestion are fundamentally sound, and that the plan should be adequately tried out whenever a medical school is fortunate enough in its endowments to be able to afford it. The plan is an expensive one, not because of the relatively high salary it is proposed to pay the heads of departments, but because it can never succeed without large staffs of full time assistants and technicians and liberal annual budgets for each department. So far as I know, no one who advocates this plan proposes to eliminate the practical clinician as a medical school teacher. It is merely proposed that he shall no longer serve as head of the main clinical departments. It would, I am convinced, be a grievous error to withhold from our students the sound professional wisdom which these men have accumulated, though I am dubious whether they or any one else can teach students to handle their patients more successfully than the hospital clinician who has never been in private practice. In my humble opinion, success in handling patients depends on such faculties as tact, humanity and knowledge of human nature, and these are by-products founded on inherent qualities, family training and experience rather than teachable attributes.

Where the employment of full time teachers is not within the reach of a medical school, certain restrictions should, in my opinion, be placed upon the heads of the main clinical departments. They should be limited to strict consultation work and this should be done in the hospital itself and should be limited in amount. The experience of some of our largest schools has shown that such a plan is practical, and while not ideal it is workable and far superior to the old method.

My conclusions as to the problems which have been discussed so far may be summarized by stating that both the science and the practice of medicine have become so complex that specialization has become a necessity; that as a result of this increasing complexity it is no longer possible for the teaching of these sciences to be adequately conducted by practitioners of medicine; that the teaching of such subjects as anatomy, physiology, physiological chemistry, pathology, bacteriology and pharmacology must be entirely in the hands of specially trained experts, assisted by full time instructors and aided by adequate technical staffs; that in the clinical branches the main principles at any rate must also be taught by full time, specially trained instructors; that there must always be a place on medical school faculties for the well-trained and competent practitioner with his years of carefully acquired experience, but that he will no longer be in a position to adequately assume the headship of the more important clinical departments for the simple reason that it is impossible to find time to supervise the innumerable details of such a department and successfully conduct a private practice.

Having discussed in a general way the changes which have occurred in our views as to the proper methods of teaching medicine, it will be advisable to consider the bearing of these changes upon those hospitals which are associated with medical schools and upon the members of the general profession who are affected by the changes.

It is now an accepted dictum that no first class medical school can exist without either owning or controlling a teaching hospital. The difficulties which have faced the medical schools in the United States in obtaining such control have been much greater than has been the case in European countries. The important nations of continental Europe have usually constructed their own university hospitals as an integral part of their medical schools, or have utilized existing hospitals more or less under government control. In Great Britain the medical schools in the beginning grew up as adjuncts to hospitals, and as a result of this, Great Britain has developed the most efficient form of clinical teaching, the system which is usually described as the "clinical clerk" system under which the senior student becomes part of the working force of the hospital. In the United States in the past clinical professors have usually been appointed on account of the fact that they controlled hospital services and quite irrespective of their teaching capacity or training. It is needless to say that in many instances the appointees have been satisfactory and even brilliant teachers, but the fact remains that the principle under which they were appointed was entirely wrong and resulted in many instances in the appointment of unfit men. At the present time the number of medical schools which own their own hospital is steadily increasing, and this is particularly true of the medical schools connected with the State Universities of the West and Middle West. Affiliations between hospitals controlled by private corporations and universities under similar control have been increasingly frequent in recent years. It has been possible to convince the trustees of many privately endowed hospitals that such an affiliation was of advantage not only to the medical school but also to the hospital itself. The advantages to the medical school are so obvious that they need no detailed mention and may be summarized in the statement that the hospital is the laboratory of the clinical years. The advantages to the hospital have not been so generally recognized, largely because medical school authorities have often failed to adequately educate hospital trustees.

The increasing complexity of medical practice has naturally been reflected in the work of the hospitals. Where twenty-five years ago a small clinical laboratory, conducted by the internes and concerned with the simple chemical examinations of secretions and excretions was sufficient, today we find in modern hospitals completely changed conditions. The chemical problems which must nowadays be attacked in the study of the sick involve processes which demand the services of properly trained chemists and require much more complicated and expensive apparatus than was needed a generation ago. The important but time-consuming immunological reactions involve methods of great accuracy which cannot be carried out successfully without trained and permanent assistance. The expensive equipment now necessary for the proper study of circulatory diseases, the electrocardiograph and similar instruments, likewise demand time and trained assistance. The X-ray department with its rapidly increasing scope calls for expensive apparatus and trained help. The conduct of the technical procedures involved in the use of these various departments is greatly facilitated from the hospital point of view by an affiliation with a first class medical school. Such an affiliation provides the men and often also the means to conduct these various departments not only more cheaply to the hospital, but frequently also more efficiently. Further than this, the amount of work which is required of the house officers in the investigation of patients along modern lines is so much more extensive than was formerly the case that the presence of senior students in the wards of the hospitals not merely facilitates the work of the institution but is practically indispensable if that work is to be properly done.

The oft-repeated objection that the use of senior medical students in the work of the wards is distasteful to the patient is, in my experience, grossly exaggerated. Within the past few years I cannot recall more than one or two patients who refused to be used for teaching purposes and, on the contrary, many patients are not only interested but actually instructed and benefitted by a clear discussion of the nature of their disease in their presence. It is to the credit of the profession and to the benefit of many patients that the haze of mystery which formerly surrounded much of our work is no longer considered necessary. While there may occasionally be patients who would be injured by open discussion of their complaints, it is always easy in such cases for the instructor to use professional terms incomprehensible to the patients and leave them in complete ignorance as to the purport of the remarks.

Another problem which the hospitals have to solve apart from and yet related to the teaching problem is the reorganization of their staffs. The old system, whereby each department had several heads of equal rank who served for definite portions of the year is, on the face of it, incompatible with the highest efficiency. No sensible business man would put his affairs into the hands of six general managers who changed every two months. He would be fully aware that such a scheme would be incompatible with continuity of policy and equality of achievement and would result in failure. In hospital work under such a plan the failure is not apparent but it is there just the same. It is essential to satisfactory hospital work that each department should be under the head of one director who should, with the assistance of his staff, map out the policy and supervise the work. This does not mean that the opportunity for the practitioners of the neighborhood to obtain hospital positions is done away with, it simply means that their work will be conducted along lines laid down by the head of the department to whom they will be responsible. Already the trustees of many hospitals have been converted to the proposition that each department should have its permanent and responsible head, and such an arrangement is becoming increasingly prevalent every year.

The relationship of the modern medical school to the practitioners of the neighborhood is always complicated when a school of the old type is being reorganized into a school of the new type. The laity sometimes forget that physicians are human beings with the interesting foibles and weaknesses of such, and even members of the profession itself occasionally overlook this fact. One might paraphrase the old saying "scratch a Russian and you find a Tartar" and substitute for it "scratch a physician and you find a human being." It could hardly be expected that changes such as have occurred in recent years in a large number of American medical schools could be affected without friction. After all, no one has yet discovered a way to make omelets without breaking eggs. Reorganization of a medical school means that some of the practitioners of the locality will be displaced and their places will be taken by others who are frequently imported for the purpose. There is only one principle upon which an efficient organization of any sort can be built up and that principle is the selection of the best available candidate, irrespective of his origin or affiliations, for every position which is open. The best that can be hoped for in any reorganization is that the local members of the profession can be prevailed upon to adopt the view that the changed conditions are for the benefit of their profession and that they will accept the changes with as good a grace as is humanly possible. On the other hand, the reorganizers should make allowances for the susceptibilities of the local profession and should endeavor to handle the situation with tact. I hope and believe that the time is not far distant when the medical profession in general will realize that the teaching of medicine is just as much a profession as the teaching of anything else. It must be obvious to anyone who has been following the changes in medical education in the past generation that there are an increasing number of men who are voluntarily devoting their lives to the teaching of medicine as a career, just as there are men in engineering and in law who are attracted by the academic rather than the practical careers in these professions. I feel confident that in time the profession in general will become more sympathetic with what may be called the teaching caste; they will realize more fully that these men are giving up the financial prizes that may be obtained in active practice by men of similar ability. Just as soon as the general profession realizes that medical teaching is a separate profession, involving a different life and different ideals from those of the practicing physician, it is certain that they will become more tolerant and less chauvinistic. The temporary friction which occurs, and will always occur, during periods of reorganization is a mere surface froth and is soon forgotten. The men who a generation ago were reviling our first real university medical school because it imported outsiders, are now sending their sons to the institution they abused, and in this respect history may be relied upon to repeat itself.

In a rapid survey, such as I have attempted to give, it is hardly necessary to say that it is only possible to hit the high places. A much more detailed discussion of the problems considered is, of course, possible did time permit it. There are many of the problems connected with the reorganization of medical education which are of great importance but which have not even been briefly touched upon. Such matters as the obtaining of permanent endowments, methods of relieving the overcrowded condition of the medical curriculum, the question of the necessity of a fifth medical year independent from the fifth hospital year, the extension of public health instruction in medical education, and the relationship of medical schools to State and local health departments,—these and many other topics of lesser importance are matters which all medical schools are now considering or must consider in the near future, and are doubtless part of your problems here. In this address I have purposely avoided these problems because I have felt that in the present stage of the development of the Albany Medical College the broad question of the relationship between medical schools, hospitals, and the profession was of more immediate importance. The object of the address will have been fulfilled if I have been able to introduce into the minds of any of those interested new ideas or new points of view in connection with these important problems.

ALBANY HOSPITAL.

Fourteenth Report of Pavilion F, Department for Mental Diseases, for the Year Ending September 30, 1916.

By J. MONTGOMERY MOSHER, M. D.

To the Board of Governors:

I have the honor to present the fourteenth report of Pavilion F, for the year ending September 30, 1916.

There remained in the Pavilion on October 1, 1915, twenty-six patients—sixteen men and ten women. There have been admitted two hundred and fifty men and one hundred and seventy-six women. The whole number of patients under treatment was, therefore, four hundred and forty-two.

There have been discharged four hundred and twenty patients—two hundred and fifty-two men and one hundred and sixty-eight women, and there remained in the Pavilion at the end of the year, fourteen men and eight women.

The following tables show the forms of disease and the results of treatment for the year, and since the opening of the Pavilion:

TABLE I.—SHOWING THE FORMS OF DISEASE AND THE RESULTS OF TREATMENT FOR THE YEAR ENDING SEPTEMBER 30, 1916

FORM OF DISEASE	Recovered		Improved		Unimproved		Died		Remaining		Total		Total
	M	W	M	W	M	W	M	W	M	W	M	W	
Acute delirium	4	...	...	3	...	2	...	...	...	...	4	5	9
Confusional insanity	2	3	7	12	7	14	...	...	...	1	16	30	46
Melancholia	3	4	10	13	10	16	1	2	3	2	27	37	64
Mania	1	1	3	5	3	3	...	...	...	1	7	10	17
Primary dementia	1	1	4	4	6	3	...	...	...	2	11	10	21
Recurrent insanity	...	...	1	4	...	2	...	...	...	...	1	6	7
Chr. delus. insanity	...	...	...	...	3	2	...	...	...	...	3	2	5
General paralysis	...	...	4	...	2	1	...	...	2	...	8	1	9
Terminal dementia	...	...	4	2	13	10	3	1	2	1	22	14	36
Idiocy and Imbecility	...	...	1	1	2	3	...	...	...	...	3	4	7
Alcoholic delirium	21	...	3	...	1	...	6	...	1	...	32	....	32
Alcoholism	...	...	58	9	3	2	...	...	1	...	62	11	73
Drug addiction	...	...	16	16	2	...	...	...	...	...	18	16	34
Hypochondriasis	1	...	...	...	...	...	...	...	1	...	2	....	2
Epilepsy	1	...	3	...	4	4	...	...	...	...	8	4	12
Neurasthenia	...	1	2	3	2	1	...	...	...	...	4	5	9
Hysteria	2	...	...	5	...	3	...	...	...	1	2	9	11
Organic brain disease	...	...	...	...	2	1	3	1	4	...	9	2	11
Cerebral concussion	3	...	...	...	...	...	...	...	...	...	3	....	3
Meningitis	...	...	...	2	...	1	1	...	...	...	1	3	4
Chorea minor	...	...	1	...	...	...	...	...	...	...	1	....	1
Fracture of skull	...	...	...	...	...	...	1	...	...	...	1	....	1
Tuberculosis	...	...	2	...	1	...	2	...	...	...	5	....	5
Pneumonia	1	...	...	...	...	...	2	...	...	...	3	....	3
Organic heart disease	...	...	1	1	2	...	1	...	...	...	4	1	5
Paralysis agitans	...	...	...	...	...	1	1	...	...	...	1	1	2
Myelitis	...	...	...	...	1	1	...	...	...	...	1	1	2
Nephritis	...	...	...	...	...	1	2	1	...	...	2	2	4
Insolation	1	...	...	...	...	...	...	...	...	...	1	....	1
Septicaemia	...	...	...	...	...	...	1	...	...	...	1	....	1
Eclampsia	...	...	1	...	...	...	...	...	...	...	1	....	1
No diagnosis	...	...	...	...	...	...	...	...	...	...	2	2	4
Totals	41	10	121	80	64	71	24	5	14	8	266	176	442

TABLE II.—SHOWING THE FORMS OF DISEASE AND THE RESULTS OF TREATMENT SINCE THE OPENING OF THE PAVILION, FEBRUARY 18, 1902

FORM OF DISEASE	Recovered		Improved		Unimproved		Died		Remaining		Total		Total
	M	W	M	W	M	W	M	W	M	W	M	W	
Acute delirium	46	62	21	28	7	22	16	15	...	...	90	127	217
Confusional insanity	16	14	48	57	48	83	5	6	...	1	117	161	278
Melancholia	34	52	64	140	73	135	4	13	3	2	178	342	520
Mania	10	18	19	38	39	49	1	...	...	1	69	106	175
Primary dementia	6	8	39	24	71	42	1	...	...	2	117	76	193
Recurrent insanity	1	...	15	28	18	27	...	...	...	...	34	55	89
Chr. delus. insanity	...	...	3	7	56	56	...	1	...	...	59	64	123
General paralysis	...	...	10	1	67	12	4	...	2	...	83	13	96
Terminal dementia	...	...	52	42	171	138	40	26	2	1	265	207	472
Idiocy and imbecility	...	...	25	16	50	45	1	...	...	...	76	61	137
Alcoholic delirium	300	18	40	7	5	2	39	2	1	...	385	29	414
Alcoholism	20	5	380	47	33	9	4	...	1	...	438	61	499
Drug addiction	18	13	43	35	9	6	3	5	...	...	73	59	132
Ptomaine poisoning	1	2	...	...	...	...	...	...	...	...	1	2	3
Nephritis	...	...	2	1	2	1	12	4	...	...	16	6	22
Eclampsia	...	1	2	...	...	1	...	1	...	...	2	3	5
Epilepsy	1	...	25	8	26	13	1	...	...	...	53	21	74
Neurasthenia	4	2	27	23	8	15	...	...	...	...	39	40	79
Hysteria	4	14	2	35	1	9	...	...	...	1	7	59	66
Chorea minor	1	1	1	1	1	1	...	...	...	...	3	3	6
Exophthalmic goitre	...	...	...	1	...	...	...	...	...	...	...	1	1
Tic douloreux	...	...	...	1	...	...	...	...	...	...	...	1	1
Hypochondriasis	1	...	16	...	6	...	1	...	1	...	25	...	25
Organic brain disease	...	...	17	10	26	7	16	11	4	...	63	28	91
Cerebral concussion	8	1	4	...	1	...	...	...	...	...	13	1	14
Oedema of the brain	...	...	...	...	1	...	1	...	...	...	2	...	2
Locomotor ataxia	...	...	3	3	1	1	...	1	...	...	4	5	9
Myelitis	...	...	...	...	1	1	...	2	...	...	1	3	4
Arthritis deformans	...	...	...	...	...	1	...	...	...	...	...	1	1
Meningitis	1	...	1	2	...	1	10	2	...	...	12	5	17
Multiple neuritis	...	...	1	...	...	1	...	...	...	...	1	1	2
Paralysis agitans	...	...	...	...	2	1	2	...	...	...	4	1	5
Hydrophobia	...	...	...	...	...	...	1	...	...	...	1	...	1
Tetanus	...	...	...	...	...	...	1	...	...	...	1	...	1
Tuberculosis	...	...	5	...	3	1	26	5	...	...	34	6	40
Typhoid fever	3	1	...	...	...	...	...	...	...	...	3	1	4
Liver disease	...	3	...	...	...	...	2	1	...	...	2	4	6
Pneumonia	3	...	...	...	...	...	12	3	...	...	15	3	18
Heart disease	...	...	4	1	2	...	8	...	...	...	14	1	15
Pernicious anaemia	...	...	...	1	...	...	...	1	...	...	...	2	2
Chlorosis	...	...	...	...	...	...	...	1	...	...	...	1	1
Septicaemia	...	...	...	...	...	...	1	1	...	...	1	1	2
Gastro-enteritis	...	...	...	...	...	...	1	...	...	...	1	...	1
Fracture of skull	...	...	...	1	2	...	5	1	...	...	7	2	9
Multiple fibromatosis	...	...	...	...	...	...	...	1	...	...	...	1	1
Carcinoma	...	...	...	...	3	...	...	...	...	...	3	...	3
Strangulated hernia	...	...	...	...	...	...	1	...	...	...	1	...	1
Pleurisy	...	...	1	...	...	...	...	1	...	...	1	1	2
Malingering	...	...	...	...	1	...	...	...	...	...	1	...	1
Insolation	1	...	...	...	...	...	...	...	...	...	1	...	1
No diagnosis	...	...	...	...	...	...	...	...	...	...	27	18	45
Totals	479	215	870	558	734	680	219	104	14	8	2343	1583	3925

The number of admissions has increased steadily, and during the last year has averaged slightly more than one a day, so that the service may be regarded as active. The largest number under care on any one day was thirty-six and the smallest, fifteen, the average being slightly over twenty-five. The average duration of treatment was twenty-one days, and the total number of days was 9,369.

The regulations of the Hospital require a report to the Governors at the termination of the service of members of the attending medical and surgical staff. The original plan of administration provided for a period of duty of three months, and quarterly statements, usually of statistical character, were submitted. The first establishment of what is technically known as a "continuous service" began with the opening of Pavilion F, and for the fourteen years of its existence the custom of an annual report, presenting not only the statistics of the year, but comment upon work and methods, has been observed. With the passing of time the development or growth of routine practice is inevitable, and much might be written which would savor of repetition. But the service of such a department is an active one, and the care of four hundred patients, each one characterized by some particular and individual manifestations, cannot fail to present problems of interest and material for thought and study. It is necessary that every lesson be learned for its possible value in future work and for the help afforded in determining principles. This is the more important because the treatment of mental affections is the most difficult and complicated branch of medical practice. In each case there is impairment of volition or consciousness, the higher mental functions, and the want of harmony between the patient and his surroundings must be restored, an operation demanding the greatest discretion and caution. It is only in recent years that the attempt has been made, for the earlier conception of insanity was of its patent anti-social expressions, and that the responsibility of others ceased when protection had been secured and the offender had been sequestered by whatever happened to be the most convenient method. When cases of insanity became sufficiently numerous to attract attention so that some special provision for them was imperative, institutions were established under the superintendence of physicians and the element of disease was recognized. It was necessary at first that plans of construction and administration be developed, and the problems of the earlier hospitals or asylums arose upon the best methods of care of chronic or confirmed cases of insanity for whom there was need of decent living. For more than a generation thought was given to the restoration of these long abused persons to some respectable standard of sanitary existence. They were provided with proper housing and food, labor suited to their limited comprehension was directed, diversion afforded, and the philanthropic men and women who promoted this great social revolution were rewarded not only by evidences of contentment and comfort on the part of their beneficiaries, but by an occasional restoration of health. This great ideal of humanity having been accomplished, attention was directed to the recent or acute cases, who were distinguished as " curable," in contrast with the " incurable," who populated the large hospitals. The original classification of patients in different wards was based upon expediency, so that " quiet " and inoffensive cases were separated from those who were " disturbed " or " excited." It soon became evident that this rule of thumb analysis was more convenient for the institution than advantageous to the patient, for active manifestations are common in the early stages of disease. In fact the sharper and more sudden the development of the symptoms the better the chance of restoration under properly conducted management. While the large hospitals must continue to provide for great numbers of chronic patients, the need of energetic medical treatment for acute cases is recognized and it is now generally accepted that special buildings, equipment and service are required. So that the former asylums for the insane are now " hospitalized," and have added to their custodial feature the equipment and resources for cure. As the strictly pathological basis of mental affections has impressed itself upon observers, it has been revealed that much may be done in general hospitals for the relief of early cases without recourse to a special institution for mental disease. Indeed mental cases of a quiet type may always be found upon the wards of general hospitals. But the general hospital should not stop at the point of ease, for its obligation extends to the relief of every sick person whose ailment offers prospect of cure. There seem to be difficulties in the way of universal adoption of this principle, and there are, of course, limitations to the resources of hospitals in smaller communities, but the introduction of these wards for mental cases in the Albany Hospital has proved beneficial in many directions. In the first place, any household in trouble from the presence of a mental case here finds relief in an emergency. Many times the patient is promptly and completely restored. The hospital itself profits, for the delirium or confusion arising in surgical or medical cases presents conditions which cannot be met upon the general wards, and the addition of special wards obviates the necessity of transferring patients to other institutions with the attendant discomfort and danger which may precipitate an unfavorable crisis. This two-fold function of Pavilion F—the reception of incipient mental cases, on the one hand, and of general cases complicated by mental symptoms on the other—has brought into prominence the one great underlying principle for which alienists have been contending for years—the unity of mental and physical disease. It is not strange that differences of opinion have been held, for the practice of medicine has not always been limited to physicians, but philosophy of all kinds has for so many ages assumed to itself proprietorship in the operations of the mind, that universal acquiescence in the doctrine of a physical basis is grudgingly given. And because the more subtle processes of thought in the realm of superstition, faith and religion are so often elaborated and dominating in mental disease, the attention of the church has been especially directed to its problems. The inconsistency of this attitude has been shown in the resort to physical methods of cures, and one of the greater curiosities of medical literature is the book by John Wesley entitled "Primitive Physic: or An Easy and Natural Method of Curing Most Diseases." In the twenty-first edition, published in Philadelphia in 1789, the following directions for the treatment of "Lunacy" are given:

Give decoction of agrimony four times a day:

Or, rub the head several times a day with vinegar in which ground-ivy leaves have been infused:

Or, take daily an ounce of distilled vinegar:

Or, boil juice of ground-ivy with sweet oil and white wine into an ontment. Shave the head, anoint it therewith, and chafe it in warm every other day for three weeks. Bruise also the leaves and bind them on the head, and give three spoonfuls of the juice warm every morning. This generally cures melancholy.

The juice alone, taken twice a day, will cure.

Or, electrify: Tried.

For "Raging Madness" the illustrious author prescribes:

Apply to the head cloths dipt in cold water:

Or, set the patient with his head under a great waterfall, as long as his strength will bear: Or, pour water on his head out of a tea-kettle:

Or, let him eat nothing but apples for a month:

Or, nothing but bread and milk: Tried.

For "Hypochondriac and Hysteric Disorders," the recommendations are:

Use cold bathing:

Or, take an ounce of quicksilver every morning, and fifteen drops of elixir of vitriol in the afternoon.

It is to be regretted that the science of medicine is far from an exact science, but the mystery of life is as remote from demonstration in other fields as in this, and the riddle may always remain. Certain facts, however, become obvious, and as instruments of precision and methods of research are developed, the comprehension of underlying causes and conditions becomes greater. When one observes the changes in character and action of the victim of a poison, for instance, there can remain no uncertainty as to the physical basis of the symptoms, even though the morbid processes are not understood. Even more striking is the restoration of normal thought in a mind distorted for a longer period of time by persistent pathological conditions. These may not be known, but are associated with palpable physical disorders to which they are to be attributed. This is particularly true of early cases in which emaciation, debility and prostration frequently reach a critical point. The antecedent history reveals some great struggle or privation, and the restitution of sound health is followed by return of the normal action of the mind. Such are the outward and visible signs. If science is unable to explain the varying chemical and physical processes of the brain cells, through the medium of which the mind manifests itself, abnormally under one set of circumstances and naturally in another, none the less is it to the credit of science that the facts have been observed and the methods of cure ascertained. But the study of the brain since the advent of the microscope has not been futile. The earlier efforts directed toward the investigation of brain tissues after death revealed the degeneration resulting from long-standing, confirmed insanity. The later attempts to determine the origin have been less definite, but are suggestive. In the case of general paresis, that fatal culmination of the lues venerea, the discovery of the organism in the diseased tissues justifies hope that in the not distant future the therapeutic antagonist may be revealed. It is further assumed that other obscure poisons developed within the body itself act harmfully upon the delicate nervous organs. Study of the circulating fluids has been comparatively barren of results, and attention has been given during the last few years to the ductless glands. These structures, long ignored, are now believed to be concerned in elaborating the constituents of the blood which insure proper nutrition. Dr. Cannon's experiments have shown changes in function of these glands in strong emotion, as fear, grief, anger. Whatever the sequence of events in this cycle of physical and mental relations, the necessity remains of preserving physical health for the protection of the mind. It is well understood that the longer a functional disturbance persists, the greater the damage, and no effort is to be spared to prevent permanent destruction. Herein lies the obligation to treat the mental case at the earliest possible moment. The conditions surrounding the patient should be favorable; these are most complete in the hospital, and the general city hospital offers equipment and advantages not to be had elsewhere. Its greatest value rests in its proximity to the home of the patient, ease of access and departure and freedom from formality. Patients and their friends must learn that skilled treatment may be had for the asking, and that they may utilize the opportunities in the same manner as for other afflictions. Insanity has too long been regarded as a condition subjecting its victim to a judicial order and commitment to an institution for the insane. No patient should be adjudged mentally incompetent until every reasonable effort has been made for the restoration of health, and this is purely a medical question. There need be only one exception to this rule, in the case of those persons who resist efforts at care, and are dangerous to themselves or to some one else. Fortunately they are the smaller number.

As the hospital extends this offer of assistance to individuals afflicted in this way, it is imperative that, on its side, every obligation be met. The wards and rooms must be attractive, homelike, and free from the appearance of restriction. It must further meet the demands or wishes of its patrons that personal comfort be considered. It is particularly advantageous that the attendance of the family of the patient be encouraged to assist physicians and nurses in gaining acquaintance with his individual characteristics, and to impart confidence to the patient. In the troubled and suspicious frame of mind, which is the accompaniment of the beginning disease, there should not be even the appearance of desertion. These demands have been met in large measure. The service is exacting and each day brings its problems, the more numerous as the number of admissions increases. The strain falls especially upon the nurses who have met the demands upon their patience and fortitude with entire acceptance, and they have shown willingness to undertake disagreeable duties and responsibilities. It may be seen from this sketchy analysis of the work of the Pavilion that its most important function is the familiarizing of the community with the real significance of mental disorders. The close association of the wards with the other departments of the hospital emphasizes the unity of all manifestation of disease, whether of the mind or the body. The accessibility to the public, in so far as visitation is encouraged within the limits of propriety, diminishes the sense of mystery with which insanity has so long been invested. And finally the training of nurses in the methods of management not only supplies knowledge, which may be advantageously used in the care of all patients, but makes available a widely scattered intelligence which may be called upon to meet certain crises and phases of disease to prevent the need of recourse to the hospital. In this complete and rounded-out education of nurses, in which this hospital stands alone, lies its greatest claim to approval.

DISCHARGES.

Of the four hundred and twenty patients discharged, fifty-one recovered and two hundred and one were improved. The percentage of cases distinctly benefited is sixty. Since the opening of the Pavilion the percentage of cases discharged as recovered and improved has been fifty-four. Of the thirty-nine hundred and twenty-six patients admitted in fourteen years, twenty-one hundred and twenty-two patients have returned to their homes with health restored. One hundred and thirty-five patients were discharged unimproved, and twenty-nine died. The cause of death were: exhaustion of alcoholism, two; tuberculosis, two; pneumonia, three; organic brain disease, three; nephritis, three; meningitis, four; heart disease, five; cirrhosis of the liver, one; pulmonary oedema, one; paralysis agitans, one; exhaustion, one; septicaemia, one; fracture of skull, two.

ACKNOWLEDGMENT.

It is a pleasure to record from year to year the harmonious relations existing between the hospital and the public officials of the city and county. Public patients are received under order of the Commissioner of Charities, and to the incumbent of that office, Hon. Alvin C. Quentel, and his associates we are indebted for the care and courtesy invariably extended in solving the frequently troublesome problems of admission and discharge.

The following gifts have been received during the year: Fifteen volumes of popular fiction from President Richmond of Union College, a collection of books from Mrs. Martin H. Glynn, magazines on different occasions from Mrs. Frederick Tillinghast, a framed picture from the Luther League of the Emmanuel Lutheran Church, and subscription to McClure's Magazine, which has had the usual renewal by a "friend," to all of whom thanks are given.

INTRAPERITONEAL RUPTURE OF BLADDER.

The President's Address, Third District Branch of the Medical Society of the State of New York, at the Annual Meeting, Cobleskill, Tuesday, September 26, 1916.

By ALVAH H. TRAVER, M. D.,
President of the Branch.

It was with some hesitation that your executive committee broke from the established custom of holding the meeting in one of the cities of the district, as we feared that the members might not come to a smaller place. But the goodly number present shows that we did well in accepting the invitation of the Schoharie County Medical Society. And I wish to take this occasion to thank you doctors of Schoharie County for this opportunity to meet with you, I know we are going to have a good time and we will return home glad that we spent the day with you.

In view of the fact that this is my second address to you and in view of the fact that I am not as old and wise as my gray hair might lead one to think, I have decided not to endeavor to give you advice but have decided to report a case that was sent to me from Schoharie County. The case I am to report was sent to me by Dr. Holding of Breakabeen.

Case of Intraperitoneal Rupture of Bladder that Lived Five Days Without Operation.

Inasmuch as it is the general belief that a patient with intraperitoneal rupture of the bladder dies soon after the accident if not operated upon, I take the liberty of reporting a case that lived five days without operation.

Mr. W. D., aged 50. While patient was under the influence of liquor he fell from a wagon striking on his abdomen on the floor. He complained of severe pain but otherwise showed litle effects from the fall. As he came from under the influence of the liquor he complained still more of the pain in his abdomen. His physician who saw him found nothing of importance on examination. During the following days he kept complaining of this severe abdominal pain. He did not vomit at any time. He had no movements of the bowels although both cathartics and enemas were given. He did not void any urine. He was catheterized by his physician, by himself, and by his wife. The amount of urine obtained at different times varied from two ounces to two quarts. At no time was any blood noticed in the urine but no careful examination was made.

On September 2, 1914, the patient was brought to the Albany Hospital in an automobile, having come a distance of fifty miles. On admission he complained of severe abdominal pain. His temperature was 97°; pulse was 140 and very weak. His body felt cold. He was placed in bed, hot water bottles were placed about him, and stimulants were given. After waiting for an hour for him to respond to the stimulants an enema was given with no effect. He was catheterized and two ounces of urine obtained.

I first saw him at 8 A. M., September 12, five days after he received the injury. He had the appearance of being a very sick man. His temperature was 97.6°. his pulse was 140. His abdomen was not distended but was very sensitive and the abdominal muscles were very rigid.

An exploratory incision was made through the right rectus above the pubis. The abdominal cavity was full of urine. In the fundus of the bladder was a hole sufficiently large to allow the introduction of two fingers. The surface of the bladder was gray in color and was necrotic.

The urine within the peritoneal cavity was sponged out. The rent in the bladder was closed with great difficulty as the stitches kept cutting through the necrotic bladder wall. Chromic cat-gut stitches were used. In order to strengthen the bladder the omentum was stitched over the fundus of the bladder where the opening had been closed. A self-retaining catheter was left in the bladder. The abdominal wall was sutured with chromic cat-gut and silk worm-gut, drainage of gauze and rubber were left in the abdominal cavity. The patient was placed in Fowler's position and enemas of saline were given. Nothing was given by mouth for forty-eight hours.

The patient recovered nicely after the operation with no complications except that forty-eight hours after operation a small amount of urine came from the abdominal drain. This drainage continued in less and less amounts for nineteen days, since which time the patient has had no trouble in any way. Letter received from patient September 13, 1916, says: "I got along well after leaving the hospital. I am strong and work every day."

I am led to report this case not because of rarity of cases of rupture of the bladder but because of the long time that had elapsed from time of injury till time the operation was performed.

It is of interest to note what the various surgeries state in regard to ruptured bladder. Fowler's *Surgery* says, "Prognosis is always grave. The intraperitoneal cases promptly perish if operative interference is not instituted at once." Mumford's *Surgery* says, "Up to 25 years ago intraperitoneal ruptures were held to be fatal. Operative treatment for intra-peritoneal rupture is imperative and should be instant." Keen's *Surgery* says, "The vast difference between the results of such injuries under the old expectant plan of treatment and the modern one is indicated by statistics on the subject. In 1882 report of 166 cases resulted in 149 deaths and seventeen recoveries. In 1892 twenty-two cases resulted in seven deaths and fifteen recoveries. This great improvement has been brought about by prompt operation. Of the cases of rupture operated on within first twelve hours, the mortality is about thirty-eight per cent, from twelve to twenty-four hours, seventy per cent, after that about seventy-three per cent. The necessity for prompt action is apparent."

I am unable to find what the mortality rate in cases operated on five days after injury as I have seen recorded only one case that lived that long without operation. That was a case reported by Quick in *Annals of Surgery,* 1907. He reports a case that lived although the operation was not done till eleven days after injury.

One might be led to conclude that the reason this patient of mine did not die of peritonitis was that the urine was kept in a sterile condition. Yet this hypothesis must be given up for during the five days after injury till time patient entered hospital he was catheterized by his physician, his wife, and by himself. And it cannot be expected that they all did it in a sterile manner.

Another point of interest in this case, that is the amount of urine obtained by catheter. At one time his physician obtained two quarts. Mumford in speaking of the diagnosis of ruptured bladder says, "If rupture exists, especially if an hour or more has passed since the patient urinated, the catheter will draw nothing but a little pure blood showing that the contents of the bladder have escaped inwards." Wharton and Curtis says, "By injecting a sterile solution into the bladder and allowing it to run out, if same amount is obtained, you will decide bladder is not ruptured.

The International Text-book of Surgery says, "The urine drawn off by catheter is usually more or less mixed with blood;

sometimes, after a small quantity has escaped and the flow has ceased, manipulation of catheter has passed it in through the visceral rent, and a large quantity of clear urine or turbid urinous fluid has flowed from the serous cavity. Where doubt exists it is a good plan, after drawing off any urine in bladder, to inject the viscus with a known quantity of boiled water, noting its effect and the amount returned. If the quantity collected is the same as that injected and the bladder is felt to rise up behind and then above the pubis the viscus is not ruptured; but if the quantity returned is much less than that injected, and the injection of a pint or more causes no rising up of the bladder behind the pubis a rent must be diagnosed."

It is very noticeable, in looking up this subject of ruptured bladder, that in most surgeries it was stated that a diagnosis could be made by injecting a definite amount of solution into the bladder and if a less amount was returned then the bladder was probably ruptured. With the exception of the International Text-book of Surgery no mention is made of the fact that in such catheterization you might obtain urine from the general peritoneal cavity thereby destroying the fact that the same amount should be obtained as injected. For instance in this case the amount obtained varied from two ounces to two quarts, depending on whether or not the catheter entered through the rent into the peritoneal cavity. So on filling the bladder the fluid could have flowed through the large rent of the bladder and on passing the catheter, the catheter could easily have passed through the same opening and the urine withdrawn from the peritoneal cavity thus would have been obtained the same amount as injected notwithstanding the fact that the bladder would still be ruptured.

Thus from the study of this case two things are to be learned: (1st) that in deciding the bladder is not ruptured you should not only be able to get back as much fluid as injected into the bladder but you should be able to distend the bladder so that it can be felt above the pubis; (2nd) that a patient can live several days with his peritoneal cavity full of urine. And that the peritoneum has great power to resist the irritating effects of the urine even in a case like this one in which the urine was not sterile.

ADDRESS TO THE GRADUATING CLASS OF THE GLENS FALLS HOSPITAL TRAINING SCHOOL FOR NURSES, OCTOBER 10, 1916.

By L. WHITTINGTON GORHAM, M. D.

Young ladies of the Graduating Class, I congratulate you upon the successful completion of your course of preparation for a life's work, a course which has meant hard mental and physical effort and personal sacrifices; but I am more eager to tender my congratulations to you for another reason. It is because of the opportunities now open to you. Joy in one's work, usually means happiness, and if that work is of sacred and intense human interest, the pleasure is all the greater. Theodore Roosevelt has expressed this thought: "In this world the one thing supremely worth having is the opportunity, coupled with the capacity, to do well and worthily a piece of work, the doing of which is of vital consequence to the welfare of mankind."

The field of opportunity has widened tremendously since the earliest days of nursing of which we have record, when Fabiola, a patrician Roman lady, founded a hospital in 380 A. D., with a convalescent home attached, and devoted herself and fortune to the care of the sick poor of Rome.

Throughout the dark and middle ages nursing was controlled and directed by religious bodies. The male and female monastic orders each had their nursing members. The Reformation substituted secular nursing for this system in Protestant countries. Following this change the calling fell to that of a menial office, and was adopted as a means of livelihood only by inferior women, without special training or qualifications.

Nursing remained at this low ebb until the middle of the 19th century, when a powerful new force appeared, which was destined to revolutionize the status of nursing, and greatly advance the art.

The distinctive feature of this new movement was the systematic training of nurses for their vocation, by means of a graded course of lectures, demonstrations and practical work. In other words, a school system in place of an apprentice system. As early as 1790 lectures were given to nurses in the New York Hospital, but this was an isolated effort.

The credit for inaugurating the modern system of nursing belongs to Germany and to a religious influence. The first step was the founding, in 1836, of an institute at Kaiserwerth by Pastor Fliedner, for the training of deaconesses. It was a pupil of this school, who was later destined to be the most illustrious figure in nursing history—Florence Nightingale.

The training system inaugurated on a semi-religious basis received new impetus from the Crimean War and the Civil War, when trained nurses took their places in the war hospitals. Florence Nightingale, with a staff of nurses, was sent to Crimea to superintend the military hospitals, the first time in history such a step had been taken. This was an epoch-making event. Its significance was more than that implied in the nursing of sick soldiers. Florence Nightingale grasped the principles of hygiene, then beginning to be understood, and first applied them to hospital administration. The result of her successful work in the war hospitals was to stimulate the training movement, and to raïse the status of nursing.

Appreciation of her effort in England led to the raising of a fund to establish a school for nursing, which was opened in 1860, at St. Thomas Hospital, London, where her conception of teaching, discipline, and the details of hospital administration was taught. This was the first real training school for nurses. Graduates of this institution became superintendents of newly organized schools, and within ten years such were scattered all over England and Scotland.

The first systematic training given in this country was at the Woman's Hospital in Philadelphia, where nurses were prepared for maternity work.

In 1872, the New England Hospital for Women and Children of Boston, instituted a one-year course in practical nursing with lectures and demonstrations. There were six pupils, including Linda Richards, the first nurse to receive a diploma in America, and the most notable woman in this country in the organizing of training schools.

In 1873, Bellevue Hospital Training School offered a two years' course. The same year the Massachusetts General Hospital School opened, and from that time there was a rapid and steady growth of training schools.

Previous to this new birth, nursing had stood still for so many years because medicine had been marking time also. With the first gleam of the wonderful discoveries of Pasteur, a new life was given to medicine;—the sciences of bacteriology and hygiene were born, and we began to train nurses in scientific cleanliness. Since 1880, progress in science has made the revolution of nursing complete. The result has been the elevation of the dignity of the calling, and an increasing appeal to a superior type of young women.

That the progress of nursing is dependent upon the progress of medicine can be seen by anyone who will consider the facts for a moment.

The brilliant results of modern surgery are due not entirely to better tools, more dexterous hands, or sounder judgment than the surgeons of a century ago possessed, but they are mainly due to aseptic methods, in other words scientific cleanliness. In every surgical operating room the responsibility for training nurses in technique, and for keeping all supplies and instruments sterile rests upon a nurse. Intelligent co-operation from nurses has become an indispensable part of the surgical operating room, and of the surgical operation, be it slight or be it of the most serious nature. Nursing has advanced because science has led the way; and the reverse is true to a certain extent. The more widespread throughout the country the efficiency of nurses is raised, the better will be the character of the medical and surgical work done in hospitals.

Surgery is not advancing so rapidly at the present time, as it was three decades ago. It has now reached a high state of development, and progress will be slow for a time. The immediate future seems to be in medicine. The nurse has contributed much to surgery, in the operating room, as already pointed out. What can she, and is she contributing to medicine? The laboratory is to the internist what the operating room is to the surgeon. There is a great opportunity for nurses with an appreciation of laboratory work, to co-operate in the more complicated metabolic studies of disease, which are being undertaken in our large hospitals. The future for the intelligent nurse must surely hold more of actual thoughtful co-operative work, and less of manual labor. The demand for better trained nurses is growing, not diminishing.

We have seen that the advance of medicine has meant the upward trend of nursing. This is certain to continue. If we will turn to the recent history of medical education in the United States, I think we can forecast what will ultimately happen to nursing training schools, in the light of what has happened to many medical schools.

In the last two decades, remarkable changes have occurred in medical education. Certain facts have resulted. These have been presented by the Council of Education of the American Medical Association:

1904—Medical students in U. S. A........	28,142
1915—Medical students in U. S. A........	14,891
1904—Graduates in U. S. A..............	5,747
1915—Graduates in U. S. A..............	3,536
1910—Graduates with college degrees......	15.3%
1915—Graduates with college degrees......	24.3%
1850—Number medical schools in U. S. A..	50
1880—Number medical schools in U. S. A..	100
1906—Number medical schools in U. S. A..	162
1915—Number medical schools in U. S. A..	95

Since 1904, ninety-five medical schools have closed, fifty-two by merger, forty have become extinct.

What does this wholesale death of medical schools signify? Merely this. Medicine is no longer a simple art, as it once was, to be picked up under the apprentice or preceptor system, or in proprietary schools formed by groups of busy practitioners, who give didactic lectures and quizzes with a minimum of laboratory and practical bedside work. Medicine has become a scientific study, which means a study, more practical, and more accurately founded on facts.

As a result of the extension of laboratory courses, the cost of medical instruction has greatly increased. The average expenditure on each student is from two to three times his tuition fee. To conform with the standards set up by law, large expenditures are necessary. Many of the poorer schools had to close their doors, because they were unprepared to meet these standards.

There will be no diminution in the effort to raise the standards of medical education. The American Medical Association, the Carnegie Foundation for the Advancement of Teaching and the General Education Board, speaking for the physicians, and in behalf of the best interests of the laity point the way. State laws soon follow in the wake of these directing forces for betterment.

Realizing that nursing advance follows medical advance, is it too hazardous to believe that the standards of nursing education are going to continue to be gradually raised and made uniform throughout the country? Much has been done, and is being done through the organized efforts of the National League of Nursing Education, the various State Leagues, the Department of Nursing and Health at Teachers College, Columbia, the *American Journal of Nursing,* and the numerous alumnae associations.

How truly remarkable has been the progress since 1872, when the first training school was opened. A steady upward march. From practically nothing, the admission requirements have been raised to a dignified standard. Once it was customary to consume three of the best years of a young woman's life in hard physical labor, in return for which very little real instruction was given. Now it is the constant effort in our better schools, to give a grounding in the fundamental sciences, and to replace the didactic lecture with practical laboratory work, so as to allow the student nurse to see and handle material in her courses in anatomy, physiology, chemistry, bacteriology and pathology. A few schools affiliated with university hospitals, which are allied with medical schools have a particular advantage in this regard, as they are enabled to draw upon the teaching force of the medical college for the instruction of their nurses.

The teaching of the fundamentals of medicine to nurses so that they may have an intelligent conception of what they are doing, instead of performing their daily duties perfunctorily, must of necessity require more time. This should not be obtained by adding six months or a year to the training course, but rather by the gradual reduction of the hours spent in menial tasks. A more reasonable distribution of the hours given to training hands and to training minds is desirable.

A portion of the work which the nurses shoulder can be satisfactorily performed by trained attendants, orderlies, and maids. A school for attendants or for orderlies has even been started by some hospitals.

It is not a mere dream to believe that in the near future we shall have endowed training schools for nurses, offering technical and intellectual training to young women—schools which may proudly take their places with educational institutions of the highest type.

To be the head of such an institution will carry with it distinction, for it will require much, not only a highly educated teacher, but a progressive woman gifted with leadership and steeped in the practical knowledge of modern hospital administration.

In advocating the training of nurses along advanced lines, it must not be forgotten that there is a real and very great need of less highly trained women, to care for the less serious ailments or for chronic incurable disease, where people cannot afford to pay for the specialized type of nurse. In acute disease, in surgical cases and wherever exceptional nursing skill and judgment are required we should have the best prepared nurses possible; and these should not be obtainable by the wealthy alone, but by the poor and by those in moderate circumstances, when they apply for admission to a hospital.

To supply the need for attendant care and nursing at a cheaper price, various short course schools have been established. They are at present trying to fill a public need.

This need should be met by the establishment of schools, in connection with hospitals, for the training of attendants and orderlies.

In spite of the rapid extension of the curricula in schools for nursing, the multiplicity of demands for nurses in special fields has been steadily increasing. Never were there so many interesting opportunities as to-day. A young woman can not learn all the branches of nursing any more than a young man can master all the specialties of medicine. A general ground work must be obtained first, and then if a special bent or interest develops after graduation, this line may be followed in graduate study.

In addition to private nursing, the present-day graduate may devote herself to hospital and training school work, where the positions of superintendent of hospitals, superintendent of training schools, assistants, supervisors, instructors and head nurses are open to them. Then in public health work there is an ever widening field with district or visiting nursing, infant welfare work, insurance nursing, rural visiting nursing and factory welfare work.

A third division offers work among public and private schools, and in colleges. Finally there are positions for medical social work, for office and laboratory assistant, for army, navy, Red Cross nursing, and appointments in the foreign missionary fields under university or church auspices.

Some of you may elect to follow these newer branches of nursing, but probably the majority will undertake private nursing, in some ways the most difficult and the most rewarding of all.

So much depends upon the attitude with which you approach your work. If it can only be in the spirit of true helpfulness, then you will have no need for an ethical code. If this thought is allowed to dominate you in your relations to patient, physician and the household in which you find yourself, you will store up for yourselves untold blessings in the form of gratitude, and precious places in the hearts of all whom you serve.

Editorial

An order had recently been issued that all stray dogs should be killed, and we saw many lying dead on the road. A great number had lately gone mad, and several men had been bitten and had died in consequence. On several occasions hydrophobia has prevailed in this valley. It is remarkable thus to find so strange and dreadful a disease, appearing time after time in the same isolated spot. It has been remarked that certain villages in England are in like manner much more subject to this visitation than others. Dr. Unanùe states that hydrophobia was first known in South America in 1803: this statement is corroborated by Azara and Ulloa having never heard of it in their time. Dr. Unanùe says

> that it broke out in Central America, and slowly travelled southward. It reached Arequipa in 1807; and it is said that some men there, who had not been bitten, were affected, as were some negroes, who had eaten a bullock which had died of hydrophobia. At Ica forty-two people thus miserably perished. The disease came on between twelve and ninety days after the bite; and in those cases where it did come on, death ensued invariably within five days. After 1808, a long interval ensued without any cases. On inquiry, I did not hear of hydrophobia in Van Diemen's Land, or in Australia; and Burchell says, that during the five years he was at the Cape of Good Hope, he never heard of an instance of it. Webster asserts that at the Azores hydrophobia has never occurred; and the same assertion has been made with respect to Mauritius and St. Helena. In so strange a disease, some information might possibly be gained by considering the circumstances under which it originates in distant climates; for it is improbable that a dog already bitten, should have been brought to these distant countries.
>
> *The Voyage of the Beagle.* CHARLES DARWIN.

* * *

Another Gift for the College.

The Trustees of the College are carrying out their plan of regular meetings, and are familiarizing themselves with the details of administration and the needs of the institution. This is a most hopeful sign of future progress and is already bearing fruit. At a meeting on October 24th the encouraging announcement was made of an additional gift of ten thousand dollars to the guarantee fund.

Dean Ordway's report was gratifying. It appeared that only two fourth year students had failed in the State examinations for license. There are one hundred ten students in the College and the first year registration shows an increase of eight over that of last year. A proposal to limit the number of matriculants of the first year to forty or fifty was considered, but no definite action was taken. This question will be given due thought as it is the purpose of the College authorities to restrict the number of students to the number for whom instruction can be provided. Laboratory and clinical facilities are to be carefully estimated that the work may not fall below the standard.

Dr. Willis Rodney Whitney, director of the research laboratories of the General Electric Company and a member of the Board of Trustees, proposes an advanced course of lectures to special students in the department of chemistry to be given at Union College.

The lectures on "Public Health" inaugurated last year have been held in the State Education building regularly since the opening of the term, and have carried the weight of authority given by the State Department of Health. Dr. Augustus B. Wadsworth, Director of the State Laboratory, has assumed direction of this course, which has proved eminently practical and has already justified itself as an important element of the medical curriculum. It has an especial bearing upon the training of students who will later be called upon to serve as health officers in their various communities.

After a year of uncertainty in the transformation of the college work the new organization is proving itself, and friends and alumni may take heart at the signs of progress.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, SEPTEMBER, 1916.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	22
Typhoid fever	1
Scarlet fever	0
Measles	0
Whooping cough	0
Diphtheria and croup	0
Grippe	0
Diarrheal diseases	17
Pneumonia	6
Broncho-pneumonia	2
Bright's disease	8
Apoplexy	6
Cancer	11
Accidents and violence	11

Deaths under one year	22
Deaths over seventy years	29
Death rate	17.14
Death rate less non-residents	14.60

Deaths in Institutions.

	Non-Resident.	Resident.
Albany Hospital	6	9
Albany Hospital Camp	3	3
St Peter's Hospital	2	4
Homeopathic Hospital	3	8
Maternity Hospital	2	4
Albany County Hospital	2	1
St. Margaret's House	1	1
Child's Hospital	0	1
Home of Friendless	1	1
Hospital for Incurables	0	1
Home for the Aged	3	0
Public places	5	2
	27	35

Bureau of Communicable Disease.

Cases Reported.

Typhoid fever	7
Scarlet fever	3
Diphtheria and croup	4
Chickenpox	1
Measles	2
Whoping-cough	6
Tuberculosis	27
Mumps	2
Dysentery	1
Anterior poliomyelitis	8
Ophthalmia neonatorum	2
Total	63

Number of days quarantine for scarlet fever:

Longest...... 40 Shortest...... 30 Average...... 35

Number of days quarantine for diphtheria:

Longest...... 19 Shortest...... 12 Average...... 16 1/3

Fumigations:

Houses.................. 26 Rooms.................. 116

Milk bottles disinfected.................................. 55

TUBERCULOSIS.

Living cases on record September 1, 1916		612
Cases reported:		
By card	27	
Dead cases by certificate	2	
		29
		641
Dead cases previously reported	20	
Dead cases not previously reported	2	
		22
Living cases on record October 1		619
Total tuberculosis death certificates filed during September, 1916		22
Non-resident deaths:		
Albany Hospital Camp		3
Resident deaths		19

Visits to Cases of Communicable Disease.

Tuberculosis	6
Poliomyelitis	6
Total	12
Physicians visited	15
Visits to quarantined houses	16
Investigations	26

BENDER LABORATORY REPORT.

Diphtheria.

Initial positive	4
Initial negative	85
Release positive	8
Release negative	46
Suspicious	3
No growth	1
Total	147

Sputum for Tuberculosis.

Positive	18
Negative	44
Unsatisfactory	1
Total	63

Widals.

Positive	8
Negative	23
Suspicious	8
Unsatisfactory	1
Total	40
Wassermann tests	103
Milk analyses	59

BUREAU OF NUISANCES.

Complaints made	86
Inspections	101
Plumbing	33
Sanitary	68
Reinspections	152
Plumbing	30
Sanitary	122

HEARINGS.

Cases heard before health officer	11

Nature of Cases.

Plumbing	3
Privy vault	4
Filthy premises	2
Manure	1
Dog	1

Disposition of Cases.

Abated	5
Ordered for reinspection	6

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	211
Old houses	65
New houses	146
Permits issued	124
Plumbing	86
Building	38
Plans submitted	54
Old buildings	18
New buildings	36
Houses tested	52

Blue or red	4
Peppermint	4
Water test	44
Houses examined	29
Re-examined	51
Valid	17
Without cause	12

Dead Animal Report.

Horses removed	29
Dogs removed	197
Cats removed	453
Total	679

Bureau of Markets and Milk.

Public market inspections	18
Market inspections	117
Fish market inspections	9
Fish peddler inspections	2
Hide house inspections	1
Milk depots inspected	7
Milk cans inspected	200
Milk houses inspected	25
Dairies inspected	25
Cows examined	300
Lactometer readings	67
Temperature readings	67
Fat tests	36
Sediment tests	75
Chemical tests	65
Bacterial counts	65

Miscellaneous.

Cards posted for contagious disease	11
Cards removed	5
Notices served on stores	2
Notices served on factories	2
Postal card returns sent to doctors	11
Postal card returns received from doctors	5
Inspections and reinspections	20
Work certificates issued to children	41
Vaccinations	96
Cases assigned to health physicians	59
Calls made	130

Medical News

Edited by Arthur J. Bedell, M. D.

Albany Guild for the Care of the Sick.—Department of Visiting Nursing.—Statistics for June-September, 1916, Inclusive.—Number of new cases, 629; classified as follows: Dispensary patients receiving home care, 44; district cases reported by health physicians, 22; charity cases reported by other physicians, 183; moderate income patients, 245; metropolitan patients, 135; old cases still under treatment, 501; total number of cases under nursing care during months, 1,130. Classification of diseases for the new cases: Medical, 131; surgical, 37; gynecological, 10; obstetrical under professional care, mothers 154, infants 134; eye and ear, 5; skin, 1; throat and nose, 1; dental, 0; infectious diseases in the medical list, 153; surgical list, 3. Disposition: Removed to hospitals, 35; deaths, 88; discharged cured, 354; improved, 106; unimproved, 44; number of patients still remaining under care, 503.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 5; students in attendance, 2; nurses, 6; patients carried over from last month, 1; new patients during months, 10; patients discharged, 11; visits by head obstetrician, 1; by attending obstetrician, 70; by students, 38; by nurses, 95; total number of visits for this department, 204.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 4,345; for professional supervision of convalescents, 2.227; total number of visits, 4,345; paid patients, 2,645; charity patients, 1,700; unrecorded patients, 2.227; cases reported to the Guild by 5 health physicians, and 91 other physicians, graduate nurses 7, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 348; new patients, 546; old patients, 1,378; total number of patients treated during month, 1,924. Classification of clinics held: Surgical, 49; nose and throat, 31; eye and ear, 63; skin and genito-urinary, 22; medical, 53; lung, 25; dental, 0; nervous, 12; stomach, 15; children, 45; gynecological, 33.

Medical Society of the County of Albany.—The semi-annual meeting of the Medical Society of the County of Albany was held at the Albany County Court House, Wednesday, October 18, 1916, at 8.45 P. M. Dr E. E. Hinman read a paper on "Venereal Diseases in the Army."

Medical Society of the County of Schenectady.—The regular meeting of the Medical Society of the County of Schenectady was held in the rooms of the Society in the New County Building, Tuesday, October 10, 1916, at 8.30 P. M.

Scientific program: "Infantile Paralysis," Dr. C. C. Duryee; "Report of a Case of Pernicious Anaemia with Splenectomy," Dr. A. Krida; "The Last Revision of the United States Pharmacopeia," Dr. B. H. Kirchberg.

American College of Surgeons.—The Fifth Convocation of the American College of Surgeons was held in Philadelphia, October 27, 1916.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.—The fifty-third annual meeting of the American Ophthalmological Society will be held at the Homestead Hotel, Virginia Hot Springs, Virginia, Tuesday and Wednesday, May 29th and 30th, 1917.

ANNUAL CONGRESS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.—The thirty-eighth annual congress of the American Laryngological Association was held at Washington, D. C., May 9, 10 and 11, 1916.

MEETING OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.—The twenty-ninth annual meeting of the American Association of Obstetricians and Gynecologists was held in Indianapolis, September 25 to 27.

FEDERAL INSPECTION OF INFANTILE PARALYSIS ENDS.—The federal inspection of interstate travel, which was instituted last July in New York City was discontinued October 4th.

HARVEY SOCIETY LECTURES.—The twelfth course of Harvey Society lectures began October 14th and will close April 7th. The lectures will be given on Saturday evenings in the New York Academy of Medicine. The following lectures will be given: "The New Physiology," Prof. J. S. Haldane, November 4th; "The Rôle of Fat in Diabetes," Dr. F. M. Allen; "Chemo-Therapy in Tuberculosis," Dr. P. A. Lewis, November 25th; "Growth Changes in the Mammalian Nervous System," Prof. H. H. Donaldson, December 16th; "The Supplementary Dietary Relationships Among our Natural Foodstuffs," Prof. E. V. McCollum, January 13th; "The Influence of Non-Specific Substances on Infections," Prof. J. W. Jobling, February 3rd; "The Metabolism of Mother and Offspring Before and After Parturition," Prof. J. R. Murlin, February 24th; "Cardiac Dyspnoea," Prof. F. W. Peabody, March 17th; "The Coagulation of the Blood," Prof. W. H. Howell, April 7th.

RAILWAY SURGEONS TO MEET.—The tenth annual meeting of the Minneapolis, St. Paul and Sault Ste. Marie Railway Surgical Association will be held in Minneapolis, Minn., December 12th and 13th, 1916.

THE WALNUT LODGE HOSPITAL.—The Walnut Lodge Hospital at Hartford, Conn., announces the organization of a scientific research department for the exclusive study of the symptomatology, etiology and psychology of the drink and drug neroses. Histories and date of individual cases will be gathered, tabulated and studied scientifically, for the purpose of determining what influences, physical, psychical and hereditary, have been most active in the formation of the drink and drug addictions.

AMERICAN CHEMICAL SOCIETY.—A meeting of the American Chemical Society, section of eastern New York, was held at the Albany Medical College, Friday, October 20, 1916, at 8.15 P. M. The following program was presented: "Recent Methods in the Study of Proteins with Demonstrations," Mr. P A Kober; "Remissions in Leukemia Produced by Radium in Cases Completely Resistant to X-Ray and Benzol" (a) Clinical Study by Dr. Thomas Ordway, (b) Metabolism Study by Prof. A. Knudson and Mr. T. Erdos; "Recent Development in the Bio-Chemical Study of Lipins," Prof. A. Knudson.

National Safety Congress.—The fifth annual Safety Congress was held at the Hotel Statler, Detroit, October 17th to 20th, inclusive. At this meeting, the latest developments of accident prevention and health conservation and practical problems of many industries were discussed. Sectional meetings were held on three afternoons.

Roentgenologists Meet.—The annual meeting of the American Roentgen Ray Society was held in Chicago, September 28th to 30th, 1916.

Medical Interne.—St. Elizabeth's Hospital, October 4, 1916.—The United States Civil Service Commission announces an open competitive examination for medical interne, for both men and women, on October 4, 1916, at the places mentioned in the list printed hereon. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in St. Elizabeth's Hospital (formerly Government Hospital for the Insane), Washington, D. C., at $900 a year, with maintenance, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The positions are tenable for one year, and pay $75 a month and maintenance. During the year, however, a postgraduate course in mental and neurological diagnostic methods is given, an examination is held, and promotions to the next grade, junior assistant physician, are made. Beyond this there is regular advancement for men whose services are satisfactory. St. Elizabeth's Hospital has over 3,000 patients and about 800 employees to care for. In addition to the general medical practice offered, the scientific opportunities in neurology and psychiatry are unsurpassed.

As an insufficient number of eligibles were secured as a result of the examination for this position held on June 7, 1916, qualified persons are urged to enter this examination.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

Subjects.	Weights.
1. Anatomy and physiology (general questions on anatomy and physiology, and histologic or minute anatomy)	10
2. Chemistry, materia medica, and therapeutics (elementary questions in inorganic and organic chemistry, the physiologic action and therapeutic uses and doses of drugs)	15

3. Surgery and surgical pathology (general surgery, surgical diagnosis, the pathology of surgical diseases)	20
4. General pathology and practice (the symptomatology, etiology, diagnosis, pathology, and treatment of diseases)	25
5. Bacteriology and hygiene (bacteriologic methods, especially those relating to diagnosis; the application of hygienic methods to prophylaxis and treatment)	15
6. Obstetrics and gynecology (the general practice of obstetrics, diseases of women, their pathology, diagnosis, symptoms, and treatment, medical and surgical)	15
Total	100

Applicants must show that they are graduates of a reputable medical college or that they are senior students in such an institution and expect to graduate within six months from the date of this examination. The names of senior students will not be certified for appointment in the event they attain eligibility in the examination until they have furnished proof of actual graduation.

Applicants must not have graduated previous to the year 1914 unless they have been continuously engaged in hospital, laboratory, or research work along the lines of neurology or psychiatry since graduation, which fact must be specifically shown in the application.

Applicants must be unmarried.

Age, 20 years or over on the date of the examination.

No sample questions of this examination will be furnished.

Applicants must submit to the examiner on the day of the examination their photographs, taken within two years, securely pasted in the space provided on the admission cards sent them after their applications are filed. Tintypes or proofs will not be accepted.

This examination is open to all citizens of the United States who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 1312, stating the title of the examination for which the form is desired, to the United States Civil Service Commission, Washington, D. C., or to the secretary of the United States Civil Service Board at any place mentioned in the list printed hereon. Applications should be properly executed, excluding the medical and county officer's certificates, and filed with the Commission at Washington in time to arrange for the examination at the place selected by the applicant. The exact title of the examination as given at the head of this announcement should be stated in the application form.

ARMY MEDICAL CORPS EXAMINATION.—The surgeon general of the army announces that preliminary examination for appointment of first lieutenants in the Army Medical Corps will be held early in January, 1917, at points to be hereafter designated.

Full information concerning this examination can be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to secure an invitation are that the applicant shall be a citizen of the United States, between 22 and 32 years of age at time of receiving commission in medical corps, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, of good moral character and habits, and shall have had at least one year's hospital training as an interne, after graduation. Applicants who are serving this post-graduate interneship and can complete same before October 1, 1917, can take the January examination. The examination will be held simultaneously throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible.

In order to perfect all necessary arrangements for the examination, applications should be forwarded without delay to the surgeon general of the army.

There are at present two hundred and twenty-eight vacancies in the Medical Corps of the Army.

MEDICAL CARE OF THE NATIVE ALASKAN.—The problem of caring for the natives of Alaska is among the most difficult matters which confront the government in its relations with the aboriginal tribes.

There is no central point in Alaska, Seattle being the trading centre of the territory.

These people are scattered along a waterfront of more than 5,000 miles. They live in small villages. They are still influenced by the superstitions which have come down to them from the centuries. They hide, rather than seek relief for their ailments, believing that there is some divine retribution in misfortune.

Secretary Lane of the Interior Department, who personally knows every part of Alaska, has given tender consideration to the needs of the native Alaskan, and great improvement has taken place in the care of these people, especially during the past two years.

Syphilis and tuberculosis, here as elsewhere, have wrought sad havoc with the primitive people.

The editor of the *Medical Sentinel,* in a trip just completed in Alaska, was forcibly impressed by the special interest now being shown by the government in the medical side of care for the natives.

At Juneau, Dr. Douglas Brown, a recent arrival, is in charge of a splendid native hospital just completed by the Interior Department, which looks after fourteen near-by villages. Dr. Brown serves under the Educational Division of the Interior Department, is a civil service employee and was for some years with Col. Gorgas on the Panama Zone.

At Haines a special hospital is soon to be erected for tubercular cases, and soon a colony with every modern equipment will be in operation.

In other portions of Alaska, seven or eight physicians have been put in charge of the medical Indian service, and three other small native hospitals are already maintained by the government in the territory.

An attempt is now being made by Secretary Lane to employ teachers in the Educational Division, for stations where no doctors are located, who are also trained nurses. These teachers have some special training for emergency medical work, are given a medical and surgical equipment of simple character, and provided with proper instructions for the service along medical lines. As fast as appropriations can be secured, district zones are being organized comprising a neighborhood of native villages, for which a general hospital and a competent physician is supplied.

The insane native has the benefit of care outside of Alaska, where, in a milder climate, the percentage of recoveries is very large. The tubercular insane live in a separate department, at Portland, Oregon, where they enjoy every qualification for modern treatment.

The Educational Department in these more recent departures, seeks, among other things, to educate the natives as to the prevention of tubercular infection. Also as to the dangers of syphilis, its possible cure under appropriate treatment, thereby effecting the lowest possible evil to the living, as well as to the unborn progeny of the native races of Alaska.—*Medical Sentinel.*

SCHOOL OF CHIROPODY OF NEW YORK.—The following additions have been made to the faculty of the School of Chiropody of New York: Professor of surgery, Dr. Edwin C. Adams; director of laboratories, Dr. Paul Luttinger; adjunct professor of physiology, Dr. Joseph Mark; associate professor of clinical chiropody, Dr. E. C. Rice, Washington, D. C.; lecturer on pathology, Dr. Harry E. Mereness, Jr.; lecturer on bacteriology Dr. Carl C. Franken; lecturer on surgery, Dr. S. S. Markell.

Among the special lecturers during the 1915-16 course, were the following: Dr. William H. Park, Dr. J. J. Walsh, Dr. William Francis Campbell, Dr. Arthur H. Cilley, Dr. Andrew R. Robinson, Dr. Brainderd Hunt Whitbeck, Dr. John J. Nutt, Dr. Wm. G. Lewi, Albany; Dr. Ralph H. Williams, Rochester; Dr. J. L. Bendell, Albany; Dr. Almuth C. Vandiver and Dr. Robert H. Lowie.

PERSONALS.—Dr. JOHN S. NEWCOMB (A. M. C. '88), is practising at Tolt, Washington.

—Dr. E. GERALD GRIFFIN (A. M. C. '01), of 176 Washington avenue, Albany, has started practice at Denver, Colo. Dr. Griffin was given a farewell dinner at the Albany Club.

—Dr. JEROME MEYERS (A. M. C. '07), New York City, has removed from 600 West 142nd street to 203 West 81st street.

—Dr. FREDERIC L. KREICKER (A. M. C. '11), has left Averill Park, N. Y., and is practising at 1405 State street, Schenectady.

—Dr. HORACE E. AURINGER (A. M. C. '12), is engaged in practice at Flat, Alaska.

—Dr. STERLING W. TODD (A. M. C. '12), has opened an office at 440 Delaware avenue, Albany, N. Y.

—Dr. WILLIAM C. RAUSCH, JR. (A. M. C. '13), Albany, has removed from 1094 Madison avenue to 329 State street.

—Dr. ARTHUR M. DICKINSON (A. M. C. '15), is assisting Dr. E. A. Vander Veer of 28 Eagle street, Albany.

—Dr. JOHN M. HESLIN (A. M. C. '15), is assisting Dr. J. N. Vander Veer, at 28 Eagle street, Albany.

—Dr. CHARLES L. NICKOLS (A. M. C. '15), is engaged in active practice at Philmont, N. Y.

ENGAGEMENT.—Dr. WILLIAM RAUSCH (A. M. C. '13), Albany, and Miss Edna L. Johnston, also of Albany.

DIED.—Dr. WILLIAM D. ALDRICH (A. M. C. '10), Albany, died at the Albany Hospital, September 28, 1916.

In Memoriam

JOSEPH RANSOM BROWN, M. D.

JOSEPH RANSOM BROWN, M. D., died suddenly at his home at Seward at 2:30 A. M., Friday, October 13, 1916. Although he had been in ill-health for several years from dilatation of the stomach, his death was directly due to arterio-sclerosis. The suddenness of his death came as a great shock for he had been about the village and at Cobleskill Thursday afternoon. Three weeks before he was taken with severe pains in the heart and kept his bed for a week. The last week he had been able to go about some but remained very weak. He retired early Thursday night, but was taken with severer pains than usual and died within an hour. He was conscious until a few seconds before the end and fully realized the condition of his heart for he said to those about his bedside, "It's giving out."

Dr. Brown was born at Phoenix, N. Y., March 30, 1847, and was the son of Joseph Ransom Brown, M. D., and Lucinda R. Sexton, M. D. His father graduated from the Pennsylvania Homeopathic Medical College in Philadelphia in 1853 and his mother was a graduate of the Female Medical College of Pennsylvania in 1854. His father died of yellow fever at Galveston, Texas, in 1854, where he was practicing his profession. His mother returned to the North and died at Gardnersville two years later. Upon his mother's death he was placed in care of his aunt, Sally Johnson, at East Haddam, Conn., where he remained until he enlisted in the Federal army, with the exception of the time he spent as a student at the Charlotteville and Warnerville seminaries. In 1862 at fifteen years of age he enlisted, but was taken out of the army by his relatives. On August 11, 1863, he again enlisted at Syracuse in Capt. Wallis M. Boyer's (G) Company, 15th Cavalry, N. Y. Volunteers, under the command of Major Robert M. Richardson. He served under General Philip H. Sheridan until wounded in the ankle during one of the West Virginia Campaigns in 1864. It was three days before he received surgical attendance and as a consequence was in a hospital at Philadelphia until after the war with a severe attack of general blood poisoning.

It was his father's dying wish that his boy should have a collegiate education to fit him for his own profession for it was his opinion that this was "the greatest field open for usefulness to his fellow creatures." The great esteem with which he was held by those to whom he had ministered for so many years and the confidence reposed in him by the community he served showed how well he had fulfilled his father's last wish. He was graduated from the Albany Medical College in 1868, where he studied under Drs. March, McNaughton, Armsby, Quackenbush and others equally well known. Shortly after graduation he went to Texas where he again served his country as Surgeon in the U. S. Army at Fort McKavett, San Antonio, until 1877, when he returned to Seward and married Sophrona Ann Sexton in January, 1878, who died less than a year ago on November 17, 1915. He continued the practice of his profession at Seward until the day of his death although in later years he was physically unable to attend to every call. He was a member of the Schoharie County Medical Society and the American Medical Association. At the time of his death he was Health Officer of the town of Seward in which work he took great interest.

In 1897 he was appointed Postmaster of Seward by President McKinley and held office until September of this year. At one time he was trustee of the school at Seward Valley. In politics he was a Republican and was a valued and trusted member of the County Committee for many years.

His funeral was held at his home in Seward at 10:30 A. M., Monday, October 16th. A short service was held by Rev. F. B. Blodgett, after which he was laid at rest in the family lot beside his mother, wife and daughter, Emma Grace, in Zion Rural Cemetery at Seward Center.

He is survived by his daughters. Misses May A. and Ruth S. Brown, of Seward, and his sons, Ray A. Brown, of Pine Plains, N. Y., and Joseph R. Brown, Jr., of Cobleskill, one grand-daughter, Gertrude M. Brown of Pine Plains, and his cousin, John W. Calkins, of Cobleskill.

The record of his life is one of generous service to his fellow man. He was conscientious in his professional work and without pretense or sham in his thought and life. He was the friend of every child and dumb animal. All his life he was a great reader and was unusually well informed in every line of thought. His interest in the activities of the world was keen until his last day. His greatest pleasure was in his comfortable home where all were welcome. No man surpassed him in loyalty to his family and friends.

"A kind and loving husband, a good father, a generous neighbor, an honest man—these words build a monument of glory above the humblest grave." —*The Cobleskill Times.*

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Diseases of the Skin and Eruptive Fevers. By J. FRANK SCHAMBERG, A. B., M. D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic, in the College of Graduates in Medicine, Dermatologist to the Philadelphia General Hospital, etc. Fully illustrated. Third edition thoroughly revised. Philadelphia and London. W. B. Saunders Co. 1915.

The book has been revised to include the more important advances in dermatology. Various prescriptions and doses are given in the metric as well as the Troy system. A brief chapter on the value and interpretation of the luetin test in syphilis has been inserted, therapy of syphilis rewritten to conform to present day methods, a discussion on the mild type of smallpox has been amplified, a chapter on Rocky Mountain spotted fever has been added. The book contains excellent illustrations and the descriptions of the various diseases are clear and concise. The book gives a very good idea of the prevailing opinion regarding the common and many of the more unusual skin diseases. T. O.

Exercise in Education and Medicine. By R. TAIT MCKENZIE, B. A., M. D., Professor of Physical Education and Director of the Department, University of Pennsylvania, Fellow of the College of Physicians of Philadelphia and of the American Academy of Physical Education, etc. Second edition thoroughly revised. 478 illustrations. W. B. Saunders Co. Philadelphia and London. 1915.

This book covers the subject of exercise in a very broad manner considering in detail the historical, physiological, educational, medical and social aspects of exercise. That chapter formerly devoted to physiology of exercise has been expanded into four chapters in the present book owing to the new information gained on the effects of muscular work on the heart, blood vessels and expiratory organs. The increasing recognition of athletic sports by the school and college makes them an important factor in education. The supervision and organization of play under school and municipal control is making necessary a new profession. Chapters on medical gymnastic movements and massage have been rearranged and enlarged and new chapters added on visceroptosis and functional disorders of the nervous system. The book forms an important addition to our works on preventive medicine. T. O.

The Memoirs of a Physician. Translated from the Russian of Vikenty Veressayev by Simeon Linden with an introduction by Henry Pleasant, Jr., M. D. Published by Alfred Knopf. New York, 1916.

This book is rather unusual and represents the opinions of the immature physician of a conscientious though emotional nature. Many of the opinions expressed resemble those of the young medical student. No matter how much we disagree with the opinions of the author, however, the book is well worth reading by physicians. It should at least cause them to consider various happenings of almost every day occurrence in a more serious manner. The introduction and notes by the editor explain and comment upon the book. T. O.

A Text-Book upon Pathogenic Bacteria and Protozoa. By Joseph McFarland, M. D., Sc. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical Hospital, Philadelphia. Pathologist to the Philadelphia General Hospital and to the Medico-Chirurgical Hospital, Philadelphia. Fellow of the College of Physicians of Philadelphia. Eighth edition revised with 323 illustrations, a number in colors. Philadelphia and London. W. B. Saunders Co. 1916.

The author states in the preface that because of the additions and subtractions to which the seventh edition was submitted in the preparation of this eighth edition it might be said that the text had been rewritten. The entire book has been reset. It now appears in slightly larger pages in two sizes of type and gives the general effect of contraction though there is really an expansion of matter. The book is profusely illustrated, the arrangement as above indicated adds to its convenience in reference. The work has been brought up to date by including the results of more recent investigations, Noguchi's study of rabies and poliomyelitis being included among the more recent-investigations. T. O.

Practical Materia Medica and Prescription Writing. With illustrations. By Oscar W. Bethea, M. D., Ph. G., F. C. D. Assistant professor of materia medica and instructor in prescription writing Tulane University of Lousiana. Formerly professor of chemistry and professor of pharmacology Mississippi Medical College, etc. Philadelphia. F. A. Davis Co., Publishers. 1915.

The great advances in preventive medicine in chemical, physiological and pathological research have tended increasingly to limit and restrict the use of drugs. Therefore, the subject of materia medica and prescription writing has been deemed of less and less importance in the medical school curriculum. It is possible that the use of so many proprietory preparations may be because too little emphasis has been placed upon instruction in practical materia medica in the medical schools. This book should prove valuable in giving the student an adequate conception of drug therapy for it considers the preparations and methods of administration. The details of prescription writing include a large number of fac-simile prescriptions pointing out the mistakes by rewriting the same prescriptions in proper form. It is surprising, however, that there is no consideration of the Federal or State Drug Laws and that no reference is made to them in the prescriptions written for narcotic drugs. T. O.

The Practitioner's Medical Dictionary. Containing all the words and phrases generally used in medicine and the allied sciences with their proper pronunciation, derivation and definition, by GEORGE M. GOULD, A. M., M. D. Third edition revised and enlarged by R. J. E. Scott, M. A., B. C. L., M. D. Fellow of the New York Academy of Medicine, editor of Hughes' "Practice of Medicine," etc. Based on recent medical literature with many tables. Philadelphia. P. Blakiston's Son & Co. 1916.

This new medical dictionary is presented in flexible binding and in very compact form. At first glance the type appears to be very small so that the subject could not be found so easily. Upon further use, however, it is found that the compact form facilitates ready reference and that with the heavy faced type there is no difficulty in looking up words easily and rapidly. This new edition contains about 20,000 new words. As stated above, it is compact, easy to handle and yet sufficiently comprehensive to serve present day needs. T. O.

An Introduction to Bacteriology for Nurses. By HARRY W. CAREY, A. B., M. D. Former assistant bacteriologist Bender Hygienic Laboratory, Albany, N. Y. Associate in medicine, Samaritan Hospital and City Bacteriologist, Troy, N. Y. Philadelphia. F. A. Davis Co., Publishers. 1915.

This small book by Dr. Carey covers in a simple manner the principles of bacteriology, the basis for which were lecture notes delivered by the author during eight years teaching in the Samaritan Hospital Training School. The book presents clearly and in simple language that portion of the subject which is essential for the nurse to know. A few blank pages are inserted at the end of each chapter for the convenience of the student in adding useful notes. The final chapter contains directions for bacteriological examinations. The book concludes with a glossary of bacteriological terms. The contents of this book should be completely mastered by a properly trained nurse although it would seem important to supplement it by additional reading and by demonstrations and individual laboratory work. T. O.

Laboratory Methods with special reference to the needs of the General Practitioner. By B. G. R. Williams, M. D. Member of Illinois State Medical Society, American Medical Association, etc., and E. G. C. Williams, M. D., formerly pathologist of Northern Michigan Hospital for the Insane, Traverse City, Mich. With an introduction by Victor C. Vaughan, M. D., LL. D., professor of hygiene and physiological chemistry and dean of the department of medicine and surgery University of Michigan, Ann Arbor, Mich. Third edition, illustrated with 43 engravings. St. Louis. C. V. Mosby Co. 1915.

The authors state that this book is especially designed for the general practitioner who desires to make easily and inexpensively examinations on which he may depend. It has been the aim of the author to simplify methods both as to apparatus and technique. Only the best tests are given so that the reader will not be perplexed by being obliged to do any choosing for specific cases. It would appear to the reviewer that such a book as this, while perhaps of value to the trained worker, might easily convey misleading impressions to a practitioner untrained in laboratory methods. For example, the subject of water analysis is taken up under the heading of "Some Simple Water Analyses" and includes chlorine estimation, isolation of typhoid and identification of coli bacilli in water. There are many excellent and varied procedures described including methods of post mortem examination, histological technique and clinical pathology. This book would make such procedures appear unduly simple and perhaps lead to their abuse and misinterpretation of laboratory findings.

A Manual of Hygiene and Sanitation. By Seneca Egbert, A. M., M. D. Professor of Hygiene and Dean of the Medico-Chirurgical College of Philadelphia. Member of the Academy of Natural Sciences of Philadelphia. Sixth edition enlarged and thoroughly revised. Illustrated with 141 engravings and five plates. Lea & Febriger. Philadelphia and New York. 1916.

In this sixth edition the book has been conscientiously revised in reference to the changes and advances in the past few years. The revision has, however, been conservative, an entirely new chapter on industrial hygiene has been incorporated, the changing views concerning air pollution and ventilation, the importance of outdoor schools, play grounds, the improved methods of water purification and sewage disposal are discussed. This small book considers briefly most of the essential subjects of hygiene and sanitation. T. O.

VOL. XXXVII DECEMBER, 1916 No. 12

ALBANY MEDICAL ANNALS

Original Communications

"A LADY WITH A LAMP."

An Address given at the Graduating Exercises of the Training School for Nurses of the Frederick Ferris Thompson Hospital, Canandaigua, N. Y., June 2, 1916.

BY J. MONTGOMERY MOSHER, M. D.,
Albany, N. Y.

"*It is perfectly certain that all diseases without exception are preventable; or, if not so, that they can be so weakened as to do no harm. It is perfectly certain that all accidents are preventable; there is not one that does not arise from folly or negligence. All accidents are crimes. It is perfectly certain that all human beings are capable of physical happiness. It is absolutely incontrovertible that the ideal shape of the human being is attainable to the exclusion of deformities. It is incontrovertible that there is no necessity for any man to die but of old age; and that if death cannot be prevented, life can be prolonged far beyond the farthest now known.*"

In "The Story of My Heart," a book not widely read, Richard Jefferies cries against the needless suffering of this world, and in this striking conclusion, indicates what should be the reasonable expectation of man. His morbid tone implies an unpleasant personal experience, and to the professional reader suggests a state which may be technically described as neurasthenic. But his assertion, comprehensive thought it be, cannot be lightly swept aside as the weary plaint of an invalid. He was a keen observer, and is said to have studied from youth "all the wonders of nature." The thought expressed that life of right should be free from pain, is startling, but when the causes of disease and accident are sought and analyzed, many are found avoid-able, others give hope of relief in discoveries of the future, and the sweeping arraignment assumes the majesty of a profound truth. For the history of mankind is not a record of the faults of nature, but of violation of its stern and unrelenting laws. That this may be prevented, that the design of nature may be understood by everybody, everywhere, is the condition necessary to the fullest realization of the promise of life. Such consummation is distant. It is not now within our grasp. The problem of to-day is that knowledge of the principle be gained and effort made to bring nearer the desired end.

If Jefferies' indictment of civilization be valid now, it may be applied much more forcibly to conditions of the past two thousand years. Some vague traditions of toleration of the sick come down from ancient Egypt, Greece and India, and the Holy Roman Empire at the height of its glory, gave passing thought to the afflicted or weak. Hospitals were created only when Christianity turned the thought of man from attainment of power to the spirit of service, and not until the eighteenth century did science, sympathy and charity unite to relieve the distress of sickness.

The history of hospitals is the history of Christianity. Persecution of the early Christians awakened the sentiment of goodwill to men, which, at first the theoretical basis of faith, soon became its practical manifestation. The best Roman womanhood responded, and Marcella, Paula and Fabiola are recorded as active in propagation of the new doctrine of humanity. Of the patrician class, their apostacy violated custom and tradition as the ranking order still indulged a pagan fancy for the gruesome scenes of the arena. Fabiola, particularly, will remain a superb figure in history as the founder of the first hospital which she established in Rome in the fourth century. Despised and hunted, the fathers of the church abandoned the cities to gratify their longings in solitude. There were many followers into the wilderness, and about these voluntary exiles grew the monasteries, which early assumed the function of hospitals. The word is suggestive, for to the Roman the phrase "hospital" conveyed the idea of entertainment only; whereas, in the monastic ideal, this was amplified into obligation to the helpless, forlorn, afflicted or outcast, from whatever cause.

The earlier hospitals as separate institutions were fostered by the church. In 1145 the Hospital of the Holy Ghost was opened at Montpellier, and with the approval of Pope Innocent III, the Santo Spirito was built in Rome. Nearly every city in Europe accepted the pontifical precept and the care of the sick was diverted from the monasteries. The growth and extension of this movement as well as its eventual transfer from ecclesiastical to municipal control were incident upon the great epidemics of the middle ages. In the fourteenth century sixty millions of human beings, one-fourth the population of the earth, died of the Black Death, or Plague. The Dancing Mania which followed, when the entire population of villages and cities joined in jumping processions of flagellants to the shrine of St. Vitus, is a pitiful reminder of the ignorance and superstition representing the curative art. Leprosy offered a problem not unlike that of tuberculosis to-day. The lepers at large were described as "Living Corpses; who wandered to and fro, muffled from head to foot; a hood drawn over the face, and carrying in the hand a bell, the Lazarus-bell, as it was called, through which they were to give timely warning of their approach, so that every one could get out of the way in time." Stevenson makes use of this in the disguise assumed by one of his heroes in a tale of the fifteenth century, and describes the terror inspired by the sight of the "white figure": "At every step the bell clanked. Face it had none; a white hood, not even pierced with eye-holes, veiled the head; and as the creature moved, it seemed to feel its way with the tapping of a stick. * * * He had been a tall man before he was bowed by his disgusting sickness, and even now he walked with a vigorous step. The dismal beating of his bell, the pattering of the stick, the eyeless screen before his countenance, and the knowledge that he was not only doomed to death and suffering, but shut out forever from the touch of his fellow men," filled the observer with awe and fear. It is estimated that there were nineteen thousand lazar houses in Europe in the thirteenth century.

Municipal hospitals retained the tradition of their ecclesiastical origin in their titles, as the hotels Dieu of Continental Europe, St. Bartholomew's and St. Thomas's in London, and many others. A great scourge had compelled action, and expediency and charity united to establish a form of public service destined to become universal.

Of medical knowledge in the middle ages there was none. Outside the monasteries there was little intellectual culture, which in the mediaeval mind was "childishly encyclopaedic; was turned to grammar and rhetoric, and made linguistic, so to speak—mere subjects for curious definition"—a fault from which the more accurate science of to-day is not altogether free. But monasticism kept alive the spark of human sympathy; the lamp of goodwill to men was lighted and its rays were gradually to spread throughout the world. This was the contribution of the dark ages.

The early hospitals were merely receptacles for the sick, who sought them in despair, or were thrust into them as a measure of public safety. As late as the nineteenth century they were a reproach, and in 1788 were characterized as "hot beds of disease." In the old Hôtel Dieu of Paris there were over twelve hundred beds, accommodating from four to six patients each, and eight hundred patients lay in the corridors on pallets or heaps of straw, with no separation of contagious diseases, and with no protection against filth, vermin or other abominations: "The average mortality was about twenty per cent., and recovery from surgical operations was a rarity." In some cities "physicians declined hospital service as equivalent to a sentence of death." And yet the bringing together of great numbers of sick people was to serve a useful end. Physicians learned that hospitals afforded opportunties for study and experience which enabled them to treat more successfully their remunerative patients. Thus arose the second function of the hospital, the investigation of disease. From such obscure and repellant beginnings has arisen the complicated system of clinical and laboratory observation of to-day.

The third and last function of the hospital, which more immediately concerns us, is the imparting of instruction. This advance began in the eighteenth century, when Prussia set aside a hospital and a college to supply qualified surgeons for the army, and this example was followed in France in 1785 under the same spur of military necessity. Throughout Europe many different hospitals were opened to students before the end of the century. Those old-fashioned "clinics" well merit our admiration. The physician or preceptor, making his "rounds," was attended by a small group of students, whose attention he directed to the symptoms of disease, describing the treatment and the variations from day to day. The "old masters" were experts in observation, and from their close scrutiny, analysis and comparisons was derived much of the knowledge upon which practice is now founded.

In this way Auenbrugger and Laennec discovered methods of percussion and auscultation which have revealed the mysteries of affections of the chest; Bright analyzed and assigned an apparently discordant array of symptoms to disorder of the kidneys; Sydenham differentiated gout, scarlet fever, measles, dysentery, chorea and hysteria; and others, equally famed and respected as pioneers, placed clinical medicine upon a secure foundation.

This custom of "making the rounds" was adopted in the first hospital of America—the Pennsylvania Hospital. The anecdote is told of Dr. Rush, that entering the ward with his group of students, he stopped at the threshold, and directed attention to a patient: "Please to look yonder, in the corner of the room, where that poor man lies who has been so long and so dangerously ill. I wish you to note that he is now lying upon his side. That's all for the present." When they stood beside the bed, Dr. Rush continued: "You remember, young gentlemen, that when we entered the ward by yonder door, I stopped, and called your attention to the fact that this man was lying on his side, as you now perceive, and this was the first time for many days. I took it for granted that his strength was increased, as he could not have done so else; for a man in a low, nervous fever, entirely insensible, and barely still alive, can by no means change his dorsal to a lateral decubitus. I was much pleased, gentlemen, to observe this favorable omen from the door, and now you will find by his pulse, his breathing, his improved animation, for he actually recognizes and speaks to us, that he is decidedly better, leading us to expect that the crisis is past, and that he will entirely recover, ere long." In Central New York, in the time of Dr. Rush, aspirants were taught by local practitioners. Among the early immigrants there was occasionally an educated physician; more often in the primitive community he was selected because of natural aptitude or a smattering of learning. Fortunate were they who were able to spend a few months in the hospitals of Boston, New York or Philadelphia. Among the students of Dr. Rush was one Claudius Collins Coan. Dr. Coan had gained, without assistance, his education at the Canandaigua Academy, and began his medical studies with Dr. Samuel Dungan. He walked twice from Canandaigua to Philadelphia to attend the hospital clinics, and afterward practiced sixty-five years at Ovid in Seneca county until his death at the age of eighty-eight years.

As medical colleges grew there was an unfortunate departure from this old system of bedside instruction, and the use of the word "clinic" was sadly perverted from its original significance. Lectures took the place of practical observation and for nearly a hundred years the value of hospitals in affording instruction has been subordinated, and their efficiency diminished, for there is no greater incentive to enthusiasm than that of teaching.

A generation ago hospitals were little known beyond the vague impression that the afflicted and distressed in mind or body were there gathered and isolated, and the world passed by little heeding the evolution of knowledge within the forbidding walls. And yet quietly and positively a great problem of civilization was working out of its own solution. In the seventeenth century a Jesuit priest, Athanasius Kircher, a very learned man, applied the microscope to the investigation of the causes of disease; and it is possible that he saw microörganisms. The new instrument was of some use in the study of minute anatomical structure, but two hundred years passed before bacteriology had its birth in the discoveries of Pasteur and Koch. The work of hospitals became at once of supreme importance and a new era was opened by the advent of a tangible science of prophylaxis or preventive medicine.

The phrase "preventive medicine" had been in vague use for years before its real significance was understood. Bacteriology revealed a new world, that of the " infinitely small," and microscopic organisms were found to be active in causing disease and destroying life. Speculation and theory yielded to its exact demonstrations, and methods for control and prevention of disease were suggested and in many cases realized. Microscopical and bacteriological inquiry into the symptoms of each patient demanded complicated equipment and special training which has resulted in the elaboration of the hospital plant, and extension of resources to provide accommodation for all whose ailments require thorough investigation. The old barrier of social standing has been swept aside, and with the admission of the well-to-do, the hospital as an expression of charity has ceased to exist; it has become an institution for study and cure, and a center of instruction of the community in which it exists.

In its larger sense preventive medicine means immunity from disease. This is promised by the education of the individual and of the community to an understanding of the laws of health which lead to right living. It involves cleanliness of body and of thought, observation of moral and social laws, care of the person in exercise and rest, work and play, in eating and drinking, in warmth and cold; it comprehends personal hygiene and public sanitation, and considers all the agencies involved in the cultivation of correct nutrition and function of the human organism. The safety and prosperity of the public demand that the individual maintain in perfect condition his person and his habitation, and so conduct his life that no fault of his may endanger his neighbor. It is not enough that a few educated people lead hygienic lives; it is necessary that the practice of health be universal; and that all unite to avoid accidents and disease. For this an endless campaign of education and instruction is necessary, and the base of this campaign is the hospital.

Your own hospital was founded in memory of a man whose life was stamped by sincerity and earnest purpose. General Hubbard, in his Memorial Address, described Mr. Thompson as scorning pretense, and as knowing " the difference between success and supremacy," who would have been gratified had he known that this lasting memorial speaks for ceaseless industry from year to year, in the alleviation of suffering. If, from any unavoidable cause, its work were to stop now, the good accomplished would be permanent and beyond computation. In twelve years, from the opening in June, 1904, to March 1, 1916, over six thousand patients have been relieved or comforted in distress. There have been, as an average, three visitors to each patient, so that approximately twenty-five thousand persons have gone away with better ideas of sickness and its meaning. This diffusion of knowledge is not the least of the benefits derived from such an institution. Perhaps in the future the problem will have been solved, and hospitals vanish, to yield to some other phase of the never-ending struggle for the uplift of mankind.

Advances in thought and knowledge originate in epochal discoveries. Jenner's accidental detection of vaccination, Lister's experiments in asepsis and Tyndall and Pasteur's annihilation of the doctrine of spontaneous generation established the principles upon which modern medicine is founded. But essential truths are ineffective until applied to use, and progress follows only when precept is translated into practice. It is admitted that medicine has been revolutionized by the methods of the last generation; to be more exact, it may be said that a new science, the science of health, has taken its place. The greatest single agency for disseminating knowledge of health is the trained nurse, medicine's greatest gift to humanity.

The dividing line between the function of the nurse and that of the physician is at times indistinct, and in certain circumstances this is necessarily so. Arbitrarily and officially the nurse is not permitted to make a diagnosis or to prescribe treatment. She is to apply measures directed by the physician. As the nurse and physician work side by side there is revealed a field for each. The nurse is skilled in certain manipulations which tend to the establishment or maintenance of normal function. Her ministrations are toward the conservation of strength and vitality of the patient. Except for some technical manipulations in surgery, she labors for the restoration of normal physiological conditions, which are disordered in sickness. This knowledge, valuable in controlling the damage done by disease, is no less effective in its prevention. The inexcusably large mortality of infants is to be reduced by proper methods of care and feeding, and this duty falls largely upon the nurse. The disorders of nutrition in childhood may be anticipated by her discovery of minor defects. The growing appreciation of what she may accomplish in this direction is shown by the demand for her services in schools. Her work gives great promise of control of the communicable diseases of early life. The field of prevention grows with each advance, and in private and public, the nurse becomes the most potent agent in inculcating the laws of hygiene and sanitation. Her function in the sick room is now generally understood. This is further perfected in the training of to-day by instruction in the mental phases of disease, that anxiety, fear and other depressing and harmful emotions may be met and overcome by proper encouragement.

These peculiar capabilities create a demand outside the hospital. "Visiting nurses" are employed in the public health service of cities for ministration in the homes of the poor, and in rural districts this plan is in process of adoption. They teach better use of limited resources and indulgence in small comforts or luxuries, which stimulate self-respect; ignorance, poverty, and even vice yield to the practical beneficence which speaks for new ideas and higher ideals. The community is enriched by this service. Its extent is emphasized by the increase in trained nurses in the United States from two hundred in 1880 to one hundred thousand in 1916.

Executive and administrative capacity has qualified many trained nurses for positions of responsibility and command. The perplexing problems of institutions are best appreciated by nurses who have risen step by step through the various grades of duty and instruction, and the many hospitals of smaller communities owe their existence and their excellence to the availability of trained nurses as superintendents.

So each hospital, through its graduate nurses, spreads an influence beyond its walls to promote health and happiness. With school and church it becomes a definite unit of social organization, and as such is to be cherished. Though largely the creation of private charity, the hospital attracts increasing attention on the part of the government, as problems of health become matter of public concern. This conception of the duty of the state has been seven hundred years in the making. The concessions of Magna Charta granted to each man the protection of life and property, and the struggle to maintain this right is a long record of war. The unexpected outbreak of the most terrible conflict of history has revealed how distant is the consummation. And yet, in the midst of strife there has been discerned, feebly in some places, distinctly in others, that not only the prosperity, but the integrity of nations, rests upon the physical and mental vigor of their members, and for the first time in the history of the world, attention is directed toward the conservation of the individual as an essential public policy. It has become evident that no nation is secure which ignores the health of its people. There may be difference of opinion, as to how this efficiency is to be attained; whether the human problem is to be solved by a despotism in which the individual is to be trained to kill or to resist the attempts of others to kill; or by a democracy in which each man must so conduct his life as not to endanger his neighbor. In either event the resources of medicine, for countless ages the private concern of the patient and the physician, attract the attention of the State; and the government is directly concerned in measures for the preservation and protection of health.

The nurse of to-day enters upon her work as a "missionary of sanitation." Her calling represents the present stage of progress of mankind. Criticism is not upon her technical training, which is equal to any just demand made upon it, but rather upon her personality and upon her freedom from conventional exactions. The vocation is new, and many modifications of practice will be made before its exact status is determined. There is danger that in the rapidly widening horizon of woman's activities, the superior endowment of the nurse will divert her from the care of the sick. The legitimate field is large enough, and the young graduate should resist all temptation to serve in the home as a companion or governess. The pioneer of modern nursing, Florence Nightingale, devoted her unselfish life to the relief of suffering. The change in thought following her service in the Crimean War has been compared with the difference between savagery and civilization. In civil life her thought was always of the poor. As she passed from cot to cot in the frightful hospital at Scutari, she lighted herself about with a hand lamp, and the wounded and sick soldiers blessed her presence as they spoke in affectionate terms of the "Lady with the Lamp."

There is a custom in the Russian church which may be called "the Light of the World." At Christmas the congregation enters the darkened cathedral. A candle upon the altar is lighted, to represent the dawn of Christianity, and the gradual diffusion of spiritual enlightenment is demonstrated by the igniting of one candle from another until the edifice is brilliantly illuminated. The fortuitous incident of the "Lady with the Lamp," thus bears out the analogy, as its feeble rays were the first in the ever-increasing light of health and right-living which her disciples are spreading to the remotest corners of the earth. She recognized two laws only: the first, order and obedience; the second, exact and systematic training, by which alone knowledge and power can be acquired for the overcoming of vice and the bringing of help and relief to suffering humanity.

Thus are crystallized the obligations under which these young women undertake their mission. We may hope that none will fail, that none will find distractions, that none may be called to serve as martyrs to the cause. The ten Red Cross nurses who went down with the torpedoed ship crying "Fighting men first!" were of the same fibre and the same discipline as those who graduate to-night.

The martyred nurse, Edith Cavell, received her training and her inspiration under much the same conditions as those of your hospital in Canandaigua. There is no distinction in the service or the martyrdom, except that of opportunity. It is for the community to uphold and foster this institution—hospital and school—as a necessary element in its existence, welfare and prosperity. It is for these young nurses to hold fast to the traditions arising from the sublime devotion of Florence Nightingale, leaving a lasting impression, that the picture may always remain:

"A Lady with a lamp shall stand,
In the great history of the land,
A noble type of good,
Heroic Womanhood."

Clinical and Pathological Notes

Dislocation of the Fifth Metatarsal Bone. By J. LEWI DONHAUSER, M. D.

H. R. B., age 19, college student, residing in Albany, complains of inability to walk, pain in left foot and swelling of upper and external portion of foot. Patient states that at about 5 P. M. of October 18th, while running for a car, he slipped and his ankle "turned over." The boy was not able to use his left foot immediately thereafter and had to be helped to the car. He was seen at 8 P. M. of the same evening. Examination of the left foot showed some swelling of the upper and external portion of the foot; there was marked tenderness over the plantar surface of the foot, especially in the neighborhood of the junction of the fifth metatarsal bone and the cuboidal bone; over this region there was a slight outward and upward deformity noted; on palpation the elevation of what appeared to be the metatarsal bone was pronounced. Traction was exerted in the long axis of the foot together with steady pressure on the elevated bone; with but little difficulty the dislocation was reduced, a sharp "click" being noted at apparent time of reduction.

Patient states that this same accident has happened a good many times and that he had always been able to reduce it himself.

Editorial

> "O dear, no, sir," said the forlorn man. "Nobody ever intrudes coming in here. I'm always happy to see gentlemen,—only, mostly. I'm so bad with the gout."
>
> "Have you got a sharp touch of it just now, Mr. Stringer?"
>
> "Not just to-day, sir. I've been a little easier since Saturday. The worst of this burst is over. But Lord bless you, sir, it don't leave me,—not for a fortnight at a time, now; it don't. And it ain't what I drink, nor it ain't what I eat."
>
> "Constitutional, I suppose?" said Toogood.
>
> "Look here, sir," and Mr. Stringer showed his visitor the chalk stones in all his knuckles. "They say I'm all a mass of chalk. I sometimes think they'll break me up to mark the scores behind my own door with." And Mr. Stringer laughed at his own wit.
>
> *The Last Chronicle of Barset.* ANTHONY TROLLOPE.

The Recent Development in the Metabolism of Lipins.

The word, fat, no longer suffices to define the heterogeneous group of substances which are generally grouped under this term on account of their solubility and physical nature. However, the term fat is misleading as one may wish to use it to define the chief substance of this group—that is, the true fats, glycerides of the fatty acids—or one may desire to use it in speaking of the whole group or any member of the group or mixture of them. Included under this group are the true fats, phosphatides—lecithin, cephalin, etc.—cholesterol and its esters, and related compounds.

Gies has suggested the word "lipin" to include all these substances. This term is good but has not come into common usage as yet. Bloor has recently suggested that the term "lipoid" be used and he uses it to include those substances connected with the metabolism of the fatty acids.

Our conception of the changes the lipins undergo at the beginning and the end of metabolism are fairly clear. We know that lipins are saponified in the intestine, absorbed as glycerol and fatty acids, resynthesized in the intestinal wall, passed into the lacteals as neutral fats, and finally enter the blood by means of thoracic duct. Regarding the later stage of lipin metabolism we have quite a satisfactory hypothesis. The lipins are transported to the liver and unsaturated unions are formed in the fatty acids. The unsaturated products are next found in the cells and possibly broken down where unsaturated links have been introduced. Lower acids are formed by successive oxidation at the carbon atoms, finally to the stage of acetic acid which is then completely burned to carbon dioxide and water.

Just what happens to the lipins from the time they enter the blood stream until they reach the desaturation stage we have had very little knowledge until recently. Since methods have been devised for the study of lipins in small quantities of blood further ideas have been gained, but at present these results are more or less exploratory. Methods are available at present for the determination of total fat lecithin, total cholesterol and cholesterol esters in small quantities of blood.

Bloor found that the fat of the chyle was different from fat of the food ingested and the difference depended on the fat taken. If fat of food had a low iodine number and high melting point the fat of chyle had a higher iodine number and lower melting point and vice versa. Later he observed that the fat content of the blood increased after feeding fat and reached a maximum in six to eight hours. Injections of fat emulsions into blood caused only a slight change in fat content and the fat disappeared from blood in less than five minutes. This rapid disappearance of fat is thought to be due to temporary storage in some of the organs, probably in the liver.

In the study of lipins of the blood during absorption after fat feeding Reicher observed great increases in lecithin, cholesterol and the fat. Tenvine found a parallelium between the fat and cholesterol. Bloor, likewise, made some interesting observations. He found the variations of cholesterol were small. The lecithin, however, increased an average of twenty per cent and the increase in corpuscles was most marked, 144 per cent, while in the plasma it was less striking, varying from thirteen per cent to none. Along with this great increase of lecithin the fatty acids were increased and this seemed to indicate that the blood cells absorb the fat from the plasma and transform it into lecithin. This surprising degree of constancy between the fat and the lecithin may be taken as evidence that all the absorbed fat passes through the lecithin stage and, therefore, lecithin is the first stage in fat metabolism.

There is considerable literature on the lipins of the blood, but the results vary due to the different methods used and failure to take into consideration nutritional conditions. Bloor carried out complete analyses of the lipins of the blood on samples taken eight to sixteen hours after the last meal, when the blood was free from ingested or mobilized fat. In normal blood the lecithin fraction of the corpuscles was twice that of the plasma while the cholesterol and fatty acids are always lower in corpuscles than in the plasma. The value for lecithin in the corpuscles is generally twice that of the cholesterol while in the plasma they are nearly equal. The ratio between the lecithin and cholesterol is constant in normal blood, especially in the plasma and remains so in pathological conditions. This suggests a definite relationship between the two and cholesterol most likely plays a part in lipin metabolism. The true fats are found only in small amounts in the plasma and in the corpuscles are almost absent.

The most characteristic pathologic condition of lipins of the blood is the increase of fatty acids and true fats in both plasma and corpuscles and a decrease of lecithin in the plasma. Since fat is probably the inactive form of the body lipins—the form in which is stored raw material of lipin metabolism—and the lecithin is the first stage in its utilization, an undue accumulation of fat or decreased value of lecithin indicates diminished activity of lipin metabolism. The ratio of lecithin to cholesterol is almost always a constant. In severe diabetes the blood lipins are greatly increased, but the ratios are practically normal. The low values for cholesterol which are found in anemia are suggestive of antihemolytic effects which are attributable to cholesterol.

Likewise, the low values for phosphatides in the plasma of hemophilias are suggestive, for as Howell pointed out that the phosphatide cephalin is associated with blood coagulation and injections of it into the circulation are known to give evidence of clot promoting potency.

The outline given above suffices to indicate the value of the latest application of lipin analyses to the blood, not only for the study of some of the intermediate stages in the normal lipin metabolism but also for the study of the changes occurring in pathological conditions.

ARTHUR KNUDSON.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, OCTOBER, 1916.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths

Consumption	18
Typhoid fever	1
Scarlet fever	0
Measles	0
Whooping cough	0

Diphtheria and croup	0
Grippe	1
Diarrheal diseases	8
Pneumonia	5
Broncho-pneumonia	3
Bright's disease	13
Apoplexy	9
Cancer	11
Accidents and violence	11
Deaths under 1 year	17
Deaths over 70 years	26

Death rate	16.05
Death rate less non-residents	13.95

Deaths in Institutions.

	Non-Resident.	Resident.
Albany Hospital	9	15
Albany Hospital Camp	3	5
St. Peter's Hospital	6	4
Homeopathic Hospital	2	3
Child's Hospital	1	1
Albany County Hospital	1	1
Maternity Hospital	1	4
St. Margaret's House	3	0
Home of Friendless	0	1
Hospital for Incurables	1	0
Home for the Aged	0	1
Public places	1	1
	28	36

Births	173
Still births	4

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	6
Scarlet fever	3
Diphtheria and croup	8
Chickenpox	12
Measles	4
Whooping-cough	0
Tuberculosis	30

Mumps	3
Anterior poliomyelitis	12
Total	78

Number of days quarantine for scarlet fever:
Longest...... 30 Shortest...... 30 Average...... 30
Number of days quarantine for diphtheria:
Longest...... 18 Shortest...... 18 Average...... 18
Fumigations:
Houses..................26 Rooms.................. 247
Milk bottles disinfected 69

Communicable Disease in Relation to Schools.

	Reported		Death.
	D.	I. P.	M. IP.
Lady Help of Christians	1	0	0
Albany Orphan Asylum	6	0	0
Albany Female Academy	0	1	1
Public School No. 16	0	2	0

TUBERCULOSIS.

Living cases on record October 1, 1916		619
Cases reported:		
By card	29	
Dead cases by certificate	2	
		31
		650
Dead cases previously reported	16	
Dead cases not previously reported	2	
		18
Living cases on record November 1, 1916		632
Total tuberculosis death certificates filed during October, 1916		18
Non-resident deaths:		
Albany Hospital Camp		3
Resident deaths		15

Visits to Cases of Communicable Disease.

Tuberculosis	16
Poliomyelitis	3
Ophthalmia neonatorum	2
	21

Physicians visited		11
Visits to quarantined houses		10
Investigations		124

BUREAU OF PATHOLOGY

Bender Laboratory Report on Diphtheria.

Initial positive	26
Initial negative	338
Release positive	6
Release negative	56
Suspicious	10
No growth	8
Total	444

Test of Sputum for Tuberculosis.

Positive	15
Negative	63
Total	78

Widals.

Positive	0
Negative	26
Suspicious	6
Unsatisfactory	3
Total	35
Wasserman tests	121
Milk analyses	18

BUREAU OF NUISANCES.

Complaints made		61
Inspections		66
Plumbing	30	
Sanitary	36	
Reinspections		87
Plumbing	18	
Sanitary	69	

Hearings.

Cases heard before health officer	2
Nature of cases:	
Filthy premises	2

Disposition of cases:

Ordered for reinspection	1
Abated	1

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	211
Old houses	60
New houses	151
Permits issued	133
Plumbing	90
Building	43
Plans submitted	46
Old buildings	5
New buildings	41
Houses tested	66
Blue or red	8
Peppermint	4
Water tests	54
Houses examined	28
Re-examined	69
Valid	15
Without cause	13

BUREAU OF DEAD ANIMALS.

Horses removed	28
Dogs removed	218
Cats removed	466
Total	712

BUREAU OF MARKETS AND MILK.

Public market inspections	23
Market inspections	135
Fish market inspections	14
Slaughter house inspections	3
Hide house inspections	4
Milk depots inspected	8
Milk houses inspected	95
Milk cans inspected	188
Dairies inspected	104
Cows examined	1,102
Cows quarantined	7
Cows removed	3
Lactometer readings	0
Fat tests	25

Sediment tests	84
Chemical tests	25
Bacterial counts	25
Special bacterial examinations	12
Complaints investigated	2
Meat inspected	1,105 lbs. pork

MISCELLANEOUS.

Cards posted for contagious disease	21
Cards removed	16
Notices served on stores	3
Notices served on factories	2
Postal card returns sent to doctors	21
Inspections and reinspections	35
Work certificates issued to children	63
Vaccinations	158
Cases assigned to health physicians	62
Calls made	140
Garbage collected from 1st District	818 bbls.
Garbage collected from 2d District	588 bbls.
Garbage collected from 3d District	692 bbs.

(Garbage report for September and October.)

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR OCTOBER, 1916.—Number of new cases, 199; classified as follows: Dispensary patients receiving home care, 23; district cases reported by health physicians, 1; charity cases reported by other physicians, 28; moderate income patients, 71; metropolitan patients, 76; old cases still under treatment, 503; total number of cases under nursing care during month, 702. Classification of diseases for the new cases: Medical, 30; surgical, 19; gynecological, 10; obstetrical under professional care—mothers 51, infants 42; eye and ear, 3; skin, 3; throat and nose, 1; dental, 0; infectious diseases in the medical list, 38; surgical list, 2. Disposition: Removed to hospitals, 17; deaths, 24; discharged cured, 134; improved, 14; unimproved, 15; number of patients still remaining under care, 498.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 3; nurses in attendance, 2; patients carried over from last month, 0; new patients during month, 4; patients discharged, 3; visits by head obstetrician, 0; attending obstetrician, 23; students, 24; nurses, 35; total number of visits for this department, 82.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,261; for professional supervision of convalescents, 930; total number of visits, 2,191; paid patients, 843; charity patients, 318; unrecorded patients, 930; cases reported to the Guild by 1 health physician, and 59 other physicians, graduate nurses 7, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 88; new patients, 93; old patients, 297; total number of patients treated during month, 390. Classification of clinics held: Surgical, 13; nose and throat, 6; eye and ear, 19; skin and genito-urinary, 8; medical, 11; lung, 9; dental, 0; nervous, 4; stomach, 3; children, 7; gynecological, 8.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY MOTION PICTURES.—The Medical Society of the County of Albany presented a remarkable collection of motion pictures taken in the European war hospitals, in the Auditorium of the State Education Building, Wednesday evening, November 1, 1916, at 8.30 p. m. These pictures showed Dr. Alexis Carrel demonstrating the latest operative procedures and his new method of sterilization of wounds, Dr. Sollier of Lyon showing numerous types of functional diseases contracted by the exposure and nervous strain of trench life as well as the curative exercises, Surgeon-Major Pont demonstrating plastic surgery for restoration of the face, also other scientific films of interest to the medical profession.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady was held in its rooms in the New County Building, November 14, 1916, at 8.30 o'clock.

The following papers were presented: "Open Operation in Fractures not Requiring Mechanical or Splint Support," W. L. Wallace, M. D., and Carlton F. Potter, M. D., of Syracuse; "A Study in Interpretation of X-Ray Plates of the Lungs," C. W. Woodall, M. D.

ELECTION OF OFFICERS OF THE STATE BOARD OF MEDICAL EXAMINERS.—At a meeting of the State Board of Medical Examiners held at the State Education Building, Dr. Willard J. Denno, of Albany, was re-elected secretary of the Board. Dr. Arthur J. Booth, of Elmira, was chosen president, and Dr. Lewis S. Pilcher, of Brooklyn, vice-president.

A conference was held between the Board and representatives of the State Medical Society when steps were taken to have legislation introduced at the next session of the Legislature, which will make it impossible for any but regular practitioners to treat disease in this State.

MEETING OF RENSSELAER COUNTY HEALTH OFFICERS.—At a conference of health officers of Rensselaer county held at the Hotel Rensselaer, Troy, Dr. Charles S. Prest discussed "The Tuberculosis Hospital Referendum in Rensselaer County." Dr. Linsly R. Williams, deputy state health commissioner, spoke on "The Early Diagnosis of Tuberculosis."

Dr. F. L. S. Reynolds, superintendent of the Lakeview Sanatorium, also spoke. William Leland Thompson, chairman of the Rensselaer county new sanatorium campaign committee, received a letter from Senator James W. Wadsworth, Jr., endorsing the work that the committee has done in Rensselaer county.

Clinical Congress of Surgeons of North America.—The seventh annual meeting of the Clinical Congress of Surgeons of North America was held at the Bellevue-Stratford Hotel, Philadelphia, October 23d to 28th.

American Chemical Society.—A meeting of the American Chemical Society, section of eastern New York, was held at the Albany Medical College on Friday, October 20th, at 8.15 p. m. The following papers were read: "Recent Methods in the Study of Proteins, with Demonstrations," by Mr. P. A. Kober; "Remissions in Leukemia Produced by Radium in Cases Completely Resistant to X-Ray and Benzol," (a) clinical study by Dr. Thomas Ordway; (b) metabolism study by Prof. Arthur Knudson and Mr. Theodore Erdos; "Recent Development in the Bio-Chemical Study of Lipins," by Prof. A. Knudson.

Conference on Neurosyphilis and Its Treatment.—The trustees of the Grafton State Hospital announced that the neurosyphilis wards of the Worcester department were opened for inspection on November 17, 1916, and the following papers were read by the Pathological Service of the Massachusetts Commission on Mental Diseases: "Remarks," Dr. A. Post, professor emeritus of syphilis, Harvard Medical School; "Syphilis and the Problem of the Massachusetts Commission on Mental Diseases," Dr. G. M. Kline, director of the Commission; "Response for the Grafton State Hospital," Dr. J. V. May, superintendent Grafton State Hospital; "Results of Systemic Treatment of Fifty Cases of Cerebral Syphilis (Parenchymatous and Meningovascular)," Dr. H. C. Solomon, investigator in Neurosyphilis, Massachusetts Commission, and acting clinical psychiatrist, Psychopathic Hospital; "Syphilis and Epilepsy," Dr. D. A. Thom, assistant pathologist, Massachusetts Commission; "Demonstration of Specimens in a Case of General Paresis having Catatonic Symptoms," Dr. Harold I. Gosline, pathologist, Worcester State Hospital; "General Results," Dr. E. E. Southard, pathologist, Massachusetts Commission, and director, Psychopathic Hospital.

Paralysis Decreasing.—The epidemic of poliomyelitis in New York has decreased steadily since the 1st of October. For the week ending October 8th, there were reported only 90 cases, giving a daily average of 15. On that date there were in the hospitals 1,537 patients suffering with the disease. In the other parts of the State and in New Jersey also the same decrease was noted. Federal inspection of interstate travel to and from New York, which was begun last July, was discontinued on October 3d, under instructions from Surgeon-General Blue of the United States Public Health Service.

State Plans After-Care of Infantile Paralysis.—Dr. Linsly R. Williams, Albany, deputy State commissioner of health, has announced a comprehensive plan for the after-care of infantile paralysis patients. He announces that Dr. Robert W. Lovett, Boston, will co-operate with the State Health Department, and that clinics will be held in various places throughout the State where persons who have the disease may come for advice and treatment.

Poliomyelitis Records.—Bulletin No. 43 of the health department gives records of the case fatality, hospitalization and crippling from poliomyelitis during the past summer. The true cases of poliomyelitis numbered 8,927 and the total number of deaths, 2,343, or a case fatality of 26.24 per cent. The patients treated in the hospitals of the department of health numbered 4,474, with a case fatality of 14.59 per cent. The patients admitted to twenty-seven other hospitals in the city numbered 2,663, and showed a case fatality of 14.53 per cent. The patients treated at home numbered 2,040 and showed a case fatality of 63.87 per cent. This high case fatality was mainly due to the fact that these cases were of the severest type. From August 21st to October 13th there were discharged from the hospitals of the department of health 2,058 patients. Of these, 66 per cent showed evidences of paralysis of some degree; 18 per cent showed that paralysis had wholly disappeared, while 15 per cent had not shown paralysis at any time in the course of the disease.

Ice Cream Starts Epidemic.—An epidemic of typhoid fever is reported in Harrisburg, Pa., 400 cases having occurred in the city and vicinity. It is thought that ice cream made from contaminated milk has been the main factor in the spread of the disease.

Paratyphoid Among New York Troops.—Of 1,100 men of the Fourteenth regiment who left for Texas, 130 have been or are ill with paratyphoid fever. Of the 1,600 men in the Seventy-First regiment, there have been to date fourteen cases of paratyphoid fever. The returning troops were ordered to Camp Whitman and while there a large amount of laboratory work was done by the New York State Department of Health. The examination of 850 stools revealed forty carriers, many without any history of illness. Before returning to New York all members of the Fourteenth and Seventy-First regiments received one dose of paratyphoid vaccine. In the case of the Fourteenth, because of the high degree of infection, a complete vaccination was insisted upon. After returning to New York, the troops were kept at the armory, under supervision for two weeks, before being mustered out. The chronic carriers have been made known to the board of health, and will be under their supervision. The vaccination of the families of these carriers will also be carried out by the department of health.

PREVENTION OF BLINDNESS.—The second annual meeting of the National Committee for the Prevention of Blindness was held, November 24th, in the Academy of Medicine, New York, under the presidency of William Fellows Morgan. The principal address was delivered by Surg. John McMullen, U. S. P. H. S., who described his campaign against trachoma.

FEVER COMMISSION RETURNS.—The Yellow Fever Commission of the Rockefeller Foundation, headed by Maj.-Gen. William C. Gorgas, Surgeon-General, U. S. Army, returned from its tour of investigation in South America, arriving in New York, September 25th. The commission has thus far visited Ecuador, Peru, Colombia and Venezuela. No yellow fever was found excepting at Guayaquil, Ecuador, where thirty deaths occurred during June and July. October 7th, the commission sailed again to study the situation in eastern South America and the Amazon valley; eventually it will go to Mexico and Yucatan.

CENTRALIZATION OF RED CROSS.—The demand for the courses of instruction conducted under the direction of the National Committee on Red Cross Nursing Service has developed so rapidly that some of the Red Cross chapters in the larger cities have organized teaching centers. This centralization of instruction has been found to result in greater economy, more uniform teaching, better control, and better classification of those who complete the courses. Centers have already been established in Cincinnati, Chicago, Los Angeles, and New York. To facilitate the dissemination of information about the needs of European war sufferers among its chapters, the American Red Cross has established a special bureau in the Metropolitan Tower, New York.

HEALTH INSURANCE.—A public meeting on compulsory health insurance was held under the auspices of the Committee on Medical Economics of the Medical Society of the State of New York at the Academy of Medicine, 17 West Forty-Third street, New York City, on Thursday evening, November 23d.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The forty-seventh annual meeting of this association was held at the Hotel McAlpin, New York City, October 25th and 26th, under the presidency of Dr. Edward C. Register, Charlotte, N. C.

PERSONALS.—Dr. WILLIAM O. STILLMAN (A. M. C. '78), Albany, has been re-elected president of the American Humane Society.

—Dr. WILBER F. MACDONALD (A. M. C. '15), is engaged in active practice at Delanson, N. Y.

—Dr. PERCY H. AUSTIN (A. M. C. '15), is assistant to Dr. Andrew MacFarlane at 274 State St., Albany.

—Dr. FRED VOSBURGH (A. M. C. '15), has been appointed attending physician to the Northern Iron Company at Standish, N. Y.

MARRIED.—Dr. THOMAS A. MCGRATH (A. M. C. '09), Hoosick Falls, and Miss Whitkoop were married on October 10, 1916.

DIED.—Dr. OWEN J. EVANS (A. M. C. '62), Minneapolis, Minn., formerly a Fellow of the American Medical Association, a veteran of the Civil War, in which he served as surgeon of the Fortieth New York Volunteer Infantry, once vice-president of the Minnesota State Medical Association and president of the Hennepin County Medical Society; a member of the city council of Minneapolis; from 1872 to 1882 health officer of Minneapolis; died suddenly October 17, 1916, aged 76.

—Dr. JOSEPH R. BROWN (A. M. C. '68), Seward, N. Y., a Fellow of the American Medical Association, a veteran of the Civil War, and acting assistant surgeon U. S. Army until 1887; health officer of the town of Seward, and since 1897 postmaster; died at his home October 13, 1916, from arterio-sclerosis.

—Dr. WELLINGTON G. STEELE (A. M. C. '86), Mongaup Valley, died after a week's illness at his home on September 10, 1916.

In Memoriam

WELLINGTON G. STEELE, M. D.

The death of Dr. Steele, which occurred at his home in Mongaup Valley, N. Y., September 10, 1916, will cause a sense of loss and distress on the part of his classmates of the Class of 1886 of the Albany Medical College, with whom he joined in the celebration of their thirtieth anniversary in Albany last June. At that time Dr. Steele appeared in good health, and spoke of the satisfaction and success of his professional career. His last illness was of a week only, and his death resulted from edema, due to acute laryngitis.

Dr. Steele was born at Morston, near Livingston Manor, July 19, 1855, a son of the late William E. and Louise Hotchkin Steele. He was therefore in the sixty-first year of his age. He entered the Albany Medical College after preparation in the public schools at his home. After his graduation he returned to Mongaup Valley, and took up the practice of the late Dr. Purdy. His career was a very active one. He was health officer of the town of Bethel from 1899 until his death, and his duties there added greatly to the demands of a large and active practice. It was thought that the strain of his work undermined his health and that the infection from which he died was contracted from a patient in his care. He was also health officer of the adjoining town and had been president of the Sullivan County Medical Society.

Dr. Steele is survived by his wife, one son, Edson Hun Steele, a student in the Albany Medical College, and four daughters.

Owen Jason Evans, M. D.

Dr. Owen Jason Evans, an alumnus of the Albany Medical College of the Class of 1862, died suddenly in Minneapolis on October 17, 1916, as he was in the act of greeting Civil War comrades who were his guests at a banquet in the G. A. R. hall at the court house. The cause of death was heart disease.

Dr. Evans was born at Remsen, N. Y., February 5, 1840, and after completing the course at the Rome Academy, entered the Albany Medical College. During the same week in which he received his medical diploma he accepted a commission as assistant surgeon in the Fortieth New York Volunteer Infantry with the rank of first lieutenant. He served with the Army of the Potomac until after the battle of Chancellorsville, when he was detailed as a member of the surgical staff of the brigade. Before his discharge he was promoted to be surgeon of his regiment.

After the war Dr. Evans settled in Minneapolis and began the practice of his profession, in which he was active until about fifteen years before his death. He was at one time vice-president of the Minnesota State Medical Society, and president of the Hennipen County Medical Society. He was quite active in municipal affairs, and was elected to the city council in 1875. He was the last surviving member of the city council which granted the street railway franchise, the last surviving charter member of both the State and County Medical Society, and was next to the oldest member of the Westminster Presbyterian Church. In the year of 1884 he was elected to the State Legislature, and was energetic in placing the beautiful Minnehaha park as a state park. He was also city health officer for two terms from 1878 until 1882, and in 1881 was a member of the city board of education. He married in 1869 Miss Elizabeth Dodge, of Princeton, Ill. His wife died in 1879, and in 1890 he married Miss Tamazine McKee, who survives him. There were no children.

WILLIAM DAVID ALDRICH, M. D.

Albany Medical Annals
December, 1916

Dr. Evans is described as having been an inveterate joker. One particular hobby was horses. He suffered for years from some painful ailment of the leg, but did not permit this to overcome his invariable cheerfulness. At his death he had the respect of the community of which for such a long time he had been an active and influential member.

William David Aldrich, M. D.

William David Aldrich, M. D., was born in Weavertown, Warren county, N. Y., July 6, 1883; the son of Dr. W. W. Aldrich and Cora E. Wadell. His father was and still is an active practitioner in this village.

Dr. Aldrich, Jr., received his preliminary education in the Weavertown village school, and when it came time was sent to the high school at Warrensburg. Upon graduation from the Warrensburg High School he entered the Troy Conference Academy for a couple of years, among his schoolmates at that time being Dr. Royal E. LaGrange, now practicing at Fort Ann, N. Y. From the Troy Conference Academy he went to Syracuse University intending to fit himself for a physician's place in the world, entering with the Class of 1909, but at the end of one year's work the goal seemed to be so far away that he left Syracuse University and entered the following September (1906) in the Albany Medical College, where he continued his studies for the succeeding four years with avidity, graduating well up toward the head of his class in May, 1910.

While in Syracuse University he became a member of the Beta Theta Pi Fraternity, and when he entered the Albany Medical College he joined the Medical Fraternity of Nu Sigma Nu.

With a desire for a broader view of medicine he tried the examinations for interne at the Albany Hospital and received an appointment which occupied his attention until July, 1911. At the hospital during his interneship every one from superintendent down remarked at his sunny disposition and even manners, there being never a time when he seemed to lose his head no matter how great the emergency.

During the last few months of his service there he remarked one day his desire to delve further into the mysteries of the medical and surgical lesions of kidney and bladder origin, and so at the finish of his internship he became associated with Dr. James N. Vander Veer and remained with him until a few weeks before his death.

He had served as Assistant Attending Genito-Urinary Surgeon for males from April, 1915, until his death, in the Albany Hospital, and was the Attending Urologist, surgical for males, in the out patient department of the same, and was first a lecturer on genito-urinary surgery in the Albany Medical College until 1914, when the reorganization took place, and then he became an instructor in genito-urinary surgery.

He was a member of various organizations, among them being the University Club of the city of Albany, Masters Lodge, No. 5, F. & A. M., of DeWitt Clinton Council; of the Capital City Chapter, Temple Commandery, No. 2, K. T., and Cyprus Shrine in the Masonic bodies. He was also an Odd Fellow, being a member of the Johnsburgh Lodge.

His taking away is rather sad when it is known that on September 24th, being Sunday, he had a mild attack of acute plastic pleurisy, undoubtedly due to infection from a boil which he had also on the end of his nose and within the left nostril. On Monday he was distinctly worse and the infection rapidly invaded and undermined his system and a general septicaemia resulted. With the development on Tuesday morning of a thrombosis of the right cavernous sinus, there followed immediately an acute purulent meningitis that ended in death early Thursday morning, the 28th of September. The autopsy showed the virulency of an organism at certain times, for, cultures taken from the boil, from his heart blood, and from the spinal fluid and other parts, showed simply the presence of the staphylococcus aureus. J. N. V.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Formulaire Magistral Bouchardat, 35ᵉ édition revue et augmentée de formules nouvelles, par G. BOUCHARDAT, membre de l'Académie de Médecine et F. RATHERY, professeur agrégé à la Faculté de Médecine de Paris, médecin des hôpitaux. 1 vol. in-18 de 708 pages, cart. à l'anglaise, 4 francs (Paris, Librairie Félix Alcan).

In a handy pocket-sized volume, the authors discuss prescription writing, giving many formulas accepted in France; they also describe the use of antidotes for poisoning, the qualities of the various mineral waters, natural and artificial, with notes on organotherapy, serotherapy, vaccination, general hygiene, and the dietetics of diabetes.

This edition has been thoroughly revised and enlarged by the addition of many points in practical therapeutics and hygiene.

L. W. G.

Les Allemands et la Science, par le Professeur GABRIEL PETIT, d'Alfort, et MAURICE LEUDET, du *Figaro.* Préface de M. PAUL DESCHANEL, de l'Académie française, Président de la Chambre des Députés, 1 vol. in-16, 3 fr. 50 (Paris, F. Alcan, éditeur et chez tous les Libraires).

In reply to the claim for moral and intellectual superiority in Europe, which was prepared and signed by ninety-three representatives of German Science and Art, the French Academy of Sciences protested vehemently, but tersely.

It proclaimed that "the Latin and Anglo-Saxon civilizations are those which for three centuries have produced the majority of the great discoveries in the mathematical, physical and natural sciences, as well as being responsible for the principal inventions of the nineteenth century."

The authors have sought to bring proof of the above statement by collecting in one volume the opinions of some twenty-nine French scholars and scientists regarding the relations of the Germans to Science.

In the beautifully written introduction, M. Deschanel points out that one must distinguish inventive genius from the work which follows a discovery, such as application, universal organization of an industrial and commercial nature. He admits candidly that it is in the application and organization that Germany excels, and says France should learn from her.

Creation, however, he states, belongs to France especially, and to prove this enumerates a convincing list of the brilliant men who have been pioneers in every field of Science.

He mentions, among others, Ampére, who created electrodynamics; Fourier, known for his theory of heat; Lavoisier, the greatest of chemists; Hauy, founder of mineralogy; Fresnel, noted for his undulatory theory of light; Becquerel and Curie, distinguished for their work with radio-active substances; Daguerre, the discoverer of photography; Seguin, who developed the tubular engine, and made possible railroad extension; Forest and Levassor, who invented the motor driven by explosions, which led to automobiles; Marey, Renard and Santos Dumont, who were pioneers in aviation; Deville, who gave to industry a new metal aluminum, and from whom came the theory of dissociation, the corner stone of physical chemistry; Pasteur, first a pure chemist, then a biological chemist, who transformed medicine and surgery; Claude Bernard and Brown-Sequard, distinguished physiologists; Laveran, who discovered malaria; Richet, who introduced serum therapy and first recognized anaphylaxis, and Bordet, who devised the complement fixation test.

Of special interest to the physician are the chapters which deal with clinical teaching in France and Germany, and a comparison of French and German surgery.

L. W. G.

Diseases of the Digestive Tract and Their Treatment. By A. EVERETT AUSTIN, A. M., M. D.; former Professor of Physiological Chemistry at Tufts College, University of Virginia and University of Texas; present Assistant Professor of Clinical Medicine, in charge of Dietetics and Gastrointestinal Diseases, Tufts College; member of American Gastroenterological Association and American Society of Biological Chemists; Physician to Mt. Sinai Hospital and Berkeley Infirmary, and Assistant to Boston Dispensary; author of "Manual of Clinical Chemistry," etc. With eighty-five illustrations, including ten color plates. St. Louis, C. V. Mosby Co., 1916.

In this work on the diseases of the gastro-intestinal tract, the author presents in a class in a clear pleasing manner the special facts related to this branch of internal medicine. Throughout there is an effort to give methods of diagnosis which have proved effective from personal experience. This is especially the case in the chapters dealing with the analyses of gastric contents and examination of the stools, where the previous experience of the author in physiological chemistry is clearly manifested by the clear and accurate handling of these topics.

The fallacy of specialism and the making of diagnoses upon a single refined laboratory procedure is pointed out. History, physical examination, chemical analysis and radiographic study receive full consideration in each disease, without undue dependence being placed upon any one of these when taken alone.

With regard to new, and as yet unproved, theories, the author takes a conservative position. Among those which he will not accept is that of Ileal stasis, which seems altogether too common to indicate a true pathologic condition."

The diagnostic value of fractional determinations of the gastric juice is not mentioned, no doubt because the very recent introduction of this method has made experience with it limited.

The subject of treatment is carefully dealt with, embracing dietetic, physical and medicinal measures.

The book of five hundred and fifty-two pages contains eighty-five illustrations, a number of which are excellent reproductions of X-ray photographs of the stomach or intestines.

L. W. G.

The Treatment of Infantile Paralysis. By Robert W. Lovett, M. D., Professor of Orthopedic Surgery Harvard Medical School, etc., with 113 illustrations. P. Blakiston's Son & Co., Philadelphia.

A monograph on the treatment of infantile paralysis is a timely publication; and when written by an authority on the subject, such as Dr. Lovett is known to be, it is of special value. In the present work there are 163 pages of subject matter including 113 illustrations and an index. The first chapter of the book discusses the pathology, symptoms, types, etc., of infantile paralysis. The following chapters then discuss the treatment of the acute phase of the disease, the convalescent phase, and the chronic phase. A special chapter is devoted to the operative treatment of the deformities of infantile paralysis, and another chapter is concerned with treatment by muscle training. The last chapter of the book describes the spring balance muscle test that Dr. Lovett has found of great value in his work. The book is one that should be read by everyone interest in the subject.

J. M. B.

Skin Grafting. By Leonard Freeman, B. S., M. A., M. D., Professor of Surgery in the Medical Department of the University of Colorado, Surgeon to St. Joseph's Hospital, The National Jewish Hospital, and the City Hospital, Denver Colorado. Published by C. V. Mosby Co., 1912, St. Louis.

This little book of 139 pages is a complete little work on skin grafting. The various methods are discussed thoroughly and the citation of cases is so interwoven with the description of the methods employed as to lend interest and true worth to the subject. The literature of skin grafting is quite completely gone over in the text. The illustrations, though not numerous, are sufficient for an understanding of the subject and the discussion of the experimental work, though brief, is to the point. It should be in the library of every surgeon. J. L. D.

Emergency Surgery. By John W. Sluss, A. M., M. D., Associate Professor of Surgery, Indiana University School of Medicine, ex-Superintendent Indianapolis City Hospital, Surgeon to the City Hospital. Published by P. Blakiston's Son & Co., Philadelphia, Pa.

This book of 832 pages is a rather extensive compend of a book on general surgery rather than one limited to the emergent type of surgery. It is well bound, well illustrated, and its text is well written. It brings before the reader's mind a great many important subjects in a concise and simple manner. It may be used by the general practitioner as well as the student of medicine. As a true text book of surgery it is too brief and does not contain many of the details of any one subject. The writer is perhaps a little too enthusiastic in some of his advice to the general practitioner regarding those who should do light and heavy surgery and he does not perhaps lay sufficient emphasis upon the preliminary training which is essential for those who expect to do "Heavy Surgery."

If the author had confined his entire attention to that realm of surgery called "Emergency Surgery," the book would have covered the subject quite completely.

The reviewer, however, heartily recommends it to the student of medicine as a good book of reference for the emergent domain of surgery; he does not recommend it as a work to be extensively followed in the elective field of surgery. J. L. D.

NEW YORK STATE MEDICAL LIBRARY.

Edited by Miss Frances K. Ray.

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EDITED BY

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Published on the First of every month
Subscription Price, Two dollars per annum in advance
Advertising Rates given on Application

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Entered as Second Class matter at the Post Office, Albany, N. Y.

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ALBANY

MEDICAL ANNALS

Journal of the Alumni Association of the
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NOVEMBER, 1916

*Ασφαλὲς καὶ ἔμπεδον ἔστω το σὸν ἕδος. Ἐκ σκότου μὲν
ἔξαγε φάος, ἐκ δὲ πάθους ἀναψυχήν.*

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A. VANDER VEER, M. D. W. G. TUCKER, M. D. ANDREW MACFARLANE, M. D.
EDITED BY
J. MONTGOMERY MOSHER, M. D.

Published on the First of every month
Subscription Price, Two dollars per annum in advance
Advertising Rates given on Application

Address all communications to ALBANY MEDICAL ANNALS,
170 Washington Avenue, Albany, N. Y.
Entered as Second Class matter at the Post Office, Albany, N. Y.

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